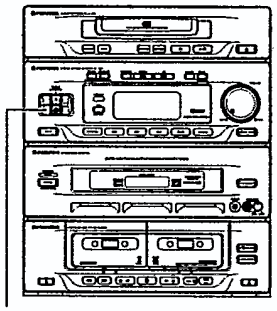
Service Manual

PIONEER®
The Art of Entertainment



(DEMO)

ORDER NO.
RRV1261

STEREO CD CASSETTE DECK RECEIVER

XR-J330
XR-J130

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model		Power Requirement	Remarks
	XR-J330	XR-J130		
MEXK/EA	○	○	AC220-230V	
MEXK/EB	○	○	AC220-230V	
NBXK	○	○	AC230V	
MEZIXK/DI	○	○	AC220-230V	

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T-DFK FEB. 1995 Printed in Japan

1. SAFETY INFORMATION

(FOR EUROPEAN MODEL ONLY)

VARO !
AVATTAESSA JA SUOJALUKITUS OHI"ETTAESSA OLET ALTT NA NÄKYMÄTTÖMÄLLE LASERSÄ"EILYLLE. ÄLÄ KA"SO SÄTEESEEN.

ADVERSEL:
USYNLIG LASERS"RÅL NG VED ABNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSAET"ELSE FOR STRÅLING.

VARNING !
OSYNLIG LASERS"RÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.

LASER
Kuva 1
Lasersateilyn varoitusmerkki

WARNING !
DEVICE INCLUDES LASER DIODE WHICH EMITS INV S BLE INFRARED RAD ATION WHICH IS DANGEROUS TO EYES. "HERE IS A WARNING SIGN ACCORDING TO PICTURE 1 NSIDE "HE DEVICE CLOSE TO "HE LASER DIODE.

MPOR"AN"
"HIS PIONEER APPARATUS CONTAINS LASER OF CLASS '.
SERVICING OPERAT'ON OF "HE APPARATUS SHOULD BE DONE BY A SPECIALLY 'NS"RUTED PERSON.

LASER DIODE CHARACTERISTICS
MAXIMUM OU"PUT POWER: 5 mw
WAVELENGTH: 780 - 785 nm

LASER
P cture 1
Warning sig" for aser radiatio"

LABEL CHECK

MEXK/EA, MEXK/EB, NBXK and MEZIXK/DI types

MEXK/EA, MEXK/EB, NBXK and MEZIXK/DI types

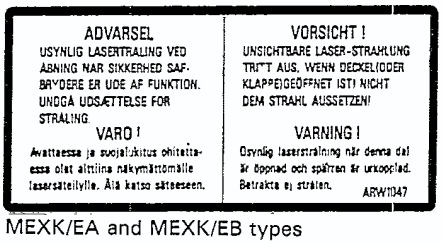
Additional Laser Caution

1. Laser Interlock Mechanism
   The position of the switch (S601) for detecting loading state is detected by the system microprocessor, and the design prevents laser diode oscillation when the switch (S601) is not on CLMP terminal side (CLMP signal is OFF or high level.) Thus, the interlock will no longer function if the switch (S601) is deliberately set to CLMP terminal side. (low level)
   The interlock also does not funct'on in the test mode*. Laser diode osci'lation wi'l continue, if pin 1 of M51593FP (IC101) on the PRE-AMP BOARD ASSY mounted on the pickup assembly is connected to GND, or pin 19 is connected to low level (ON), or else the terminals of Q101 are shorted to each other (fault condition).

2. When the cover is opened, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

'92S1B

* Refer to page 80.


ADVARSEL
USYNLIG LASERTRÅLING VED ÅBNING NÅR SIKKERHED SAF-BRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO !
Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.
VORSICHT !
UNSICHTBARE LASER-STRAHLUNG TRITT AUS, WENN DECKEL(ODER KLAPPE)GEÖFFNET IST! NICHT DEM STRAHL AUSSETZEN!
VARNING !
Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.
ARW1047

MEXK/EA and MEXK/EB types

ADVARSEL
USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHED SAF-BRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VORSICHT!
UNSICHTBARE LASER STRAHLUNG TRITT AUS, WENN DECKEL (ODER KLAPPE) GEÖFFNET IST! NICHT DEM STRAHL AUSSETZEN!
ARW1049

MEZIXK/DI type

NBXK type

2. EXPLODED VIEWS, PACKING AND PARTS LIST

NOTES :

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

2.1 PACKING

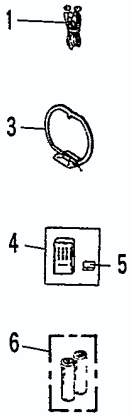
■ CONTRAST OF XR−J330/MEXK/EA, MEXK/EB, NBXK, MEZIXK/DI, XR−J130/MEXK/EA, MEXK/EB, NBXK AND MEZIXK/DI.

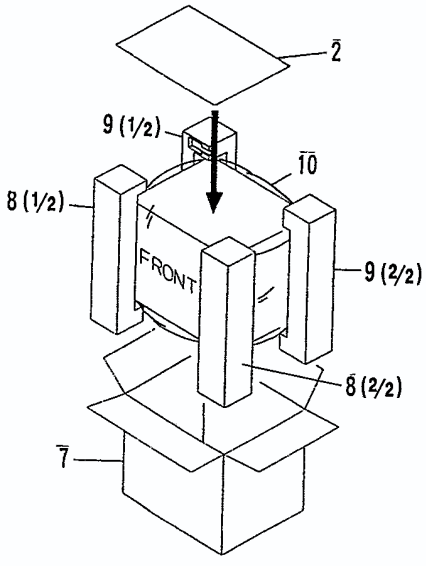
XR−J330/MEXK/EA, MEXK/EB, NBXK, MEZIXK/DI, XR−J130/MEXK/EA, MEXK/EB, NBXK and MEZIXK/DI have the same construction except for the following:

Mark	No.	Description	Part No.								Remarks
			XR−J330				XR−J130				
			MEXK/EA	MEXK/EB	NBXK	MEZIXK/DI	MEXK/EA	MEXK/EB	NBXK	MEZIXK/DI	
	1	FM antenna	ADH1017	ADH1017	ADH1017	ADH1019	ADH1017	ADH1017	ADH1017	ADH1019	
	2	Operating instructions (French/Dutch)	ARC7027	Not used	Not used	Not used	ARC7027	Not used	Not used	Not used	
	2	Operating instructions (RDS) (French/Dutch)	ARC7028	Not used	Not used	Not used	Not used	Not used	Not used	Not used	
	2	Operating instructions (German/Italian)	ARC7038	Not used	Not used	ARC7038	ARC7038	Not used	Not used	ARC7038	
	2	Operating instructions (RDS) (German/Italian)	ARC7039	Not used	Not used	ARC7039	Not used	Not used	Not used	Not used	
	2	Operating instructions (English)	Not used	ARB7018	ARB1018	Not used	Not used	ARB7018	ARB7018	Not used	
	2	Operating instructions (RDS) (English)	Not used	ARB7019	ARB1019	Not used	Not used	Not used	Not used	Not used	
	2	Operating instructions (French/Spanish/Portuguese/ Swedish)	Not used	ARC7042	Not used	Not used	Not used	ARC7042	Not used	Not used	
	2	Operating instructions (RDS) (French/Spanish/Portuguese/ Swedish)	Not used	ARC7043	Not used	Not used	Not used	Not used	Not used	Not used	
	7	Packing case	AHD7089	AHD7089	AHD7089	AHD7089	AHD7070	AHD7070	AHD7070	AHD7070	

■ PARTS LIST FOR XR−J330/MEXK/EA

Mark	No.	Description	Parts No.
	1	FM ANTENNA	ADH1017
	2	OPERATING INSTRUCTIONS (French/Dutch)	ARC7027
	2	OPERATING INSTRUCTIONS (RDS) (French/ Dutch)	ARC7028
	2	OPERATING INSTRUCTIONS (German/Italian)	ARC7038
	2	OPERATING INSTRUCTIONS (RDS) (German/Italian)	ARC7039
	3	LOOP ANTENNA	ATB1012
	4	REMOTE CONTROL UNIT	AXD7041
	5	BATTERY COVER	AZA7097
NSP	6	BATTERY (R6P, AA)	AEX7001
	7	PACKING CASE	AHD7089
	8	FRONT PAD L. R	AHA7036
	9	REAR PAD L. R	AHA7037
	10	SHEET	AHG7009





2.2 EXTERIOR (1/3)

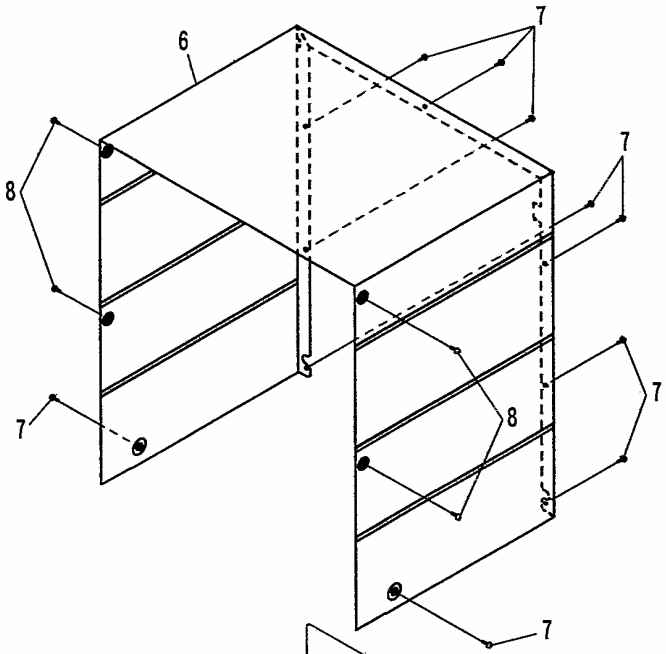
■ CONTRAST OF XR−J330/MEXK/EA, MEXK/EB, NBXK, MEZIXK/DI, XR−J130/MEXK/EA, MEXK/EB, NBXK AND MEZIXK/DI.

XR−J330/MEXK/EA, MEXK/EB, NBXK, MEZIXK/DI, XR−J130/MEXK/EA, MEXK/EB, NBXK and MEZIXK/DI have the same construction except for the following:

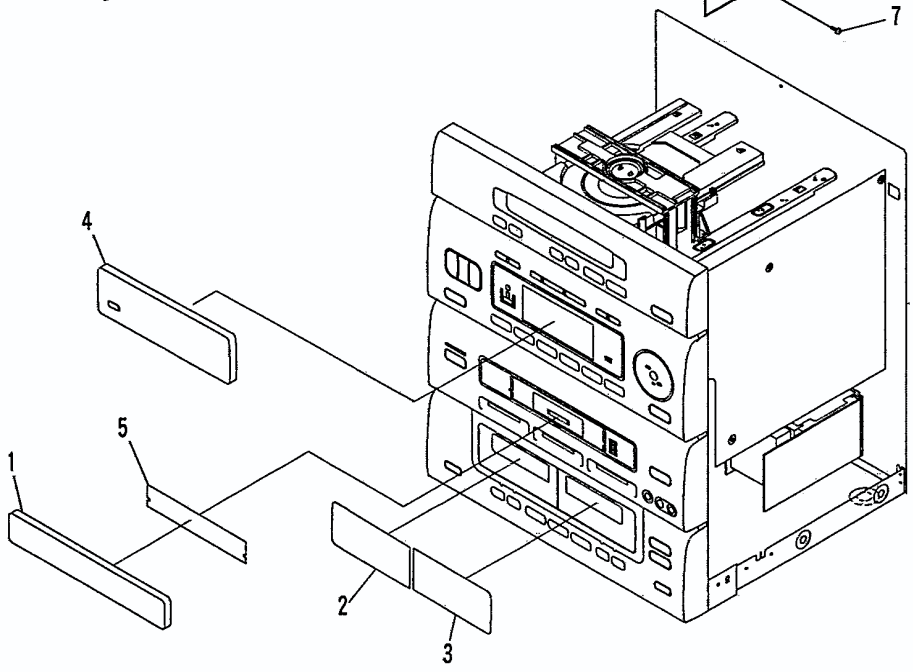
Mark	No.	Description	Part No.								Remarks
			XR−J330				XR−J130				
			MEXK/EA	MEXK/EB	NBXK	MEZIXK/DI	MEXK/EA	MEXK/EB	NBXK	MEZIXK/DI	
	4	Amp panel	AAK7120	AAK7120	AAK7120	AAK7120	AAK7102	AAK7102	AAK7102	AAK7102	
	5	Speana	AAK7121	AAK7121	AAK7121	AAK7121	AAK7109	AAK7109	AAK7109	AAK7109	

■ PARTS LIST FOR XR−J330/MEXK/EA

Mark	No.	Description	Parts No.
	1	SFC PANEL	AAK7103
	2	DECK PANEL L	AAK7104
	3	DECK PANEL R	AAK7105
	4	AMP PANEL	AAK7120
	5	SPEANA	AAK7121
	6	BONNET CASE	ANE7042
	7	SCREW	BBZ30P080FZK
	8	SCREW	VPZ30P080FZK



NOTE : Screws adjacent to ▼ mark on the product are used for disassembly.



2.3 EXTERIOR (2/3)

■ CONTRAST OF XR−J330/MEXK/EA, MEXK/EB, NBXK, MEZIXK/DI, XR−J130/MEXK/EA, MEXK/EB, NBXK AND MEZIXK/DI.

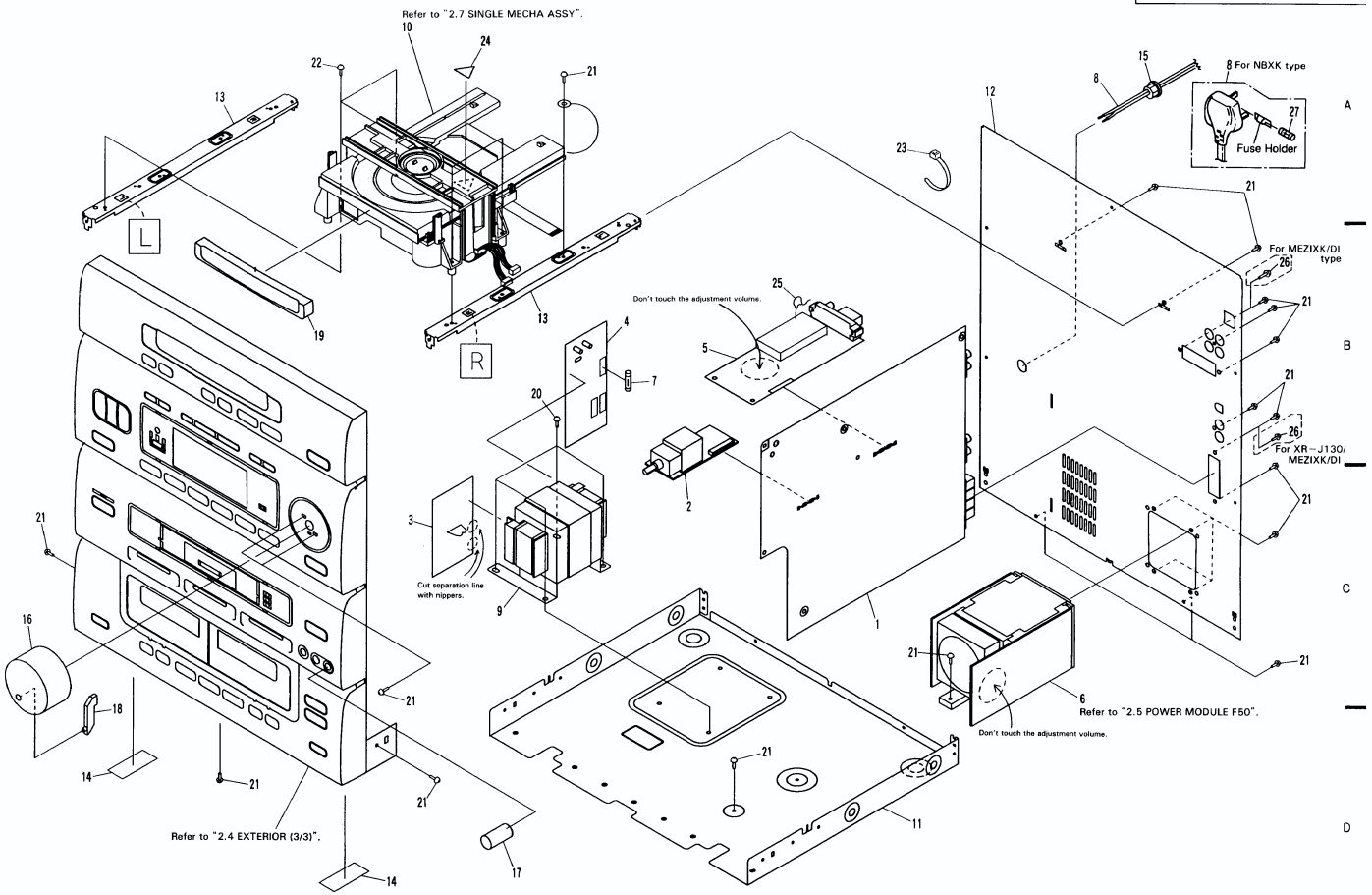
XR−J330/MEXK/EA, MEXK/EB, NBXK, MEZIXK/DI, XR−J130/MEXK/EA, MEXK/EB, NBXK and MEZIXK/DI have the same construction except for the following:

Mark	No.	Description	Part No.								Remarks
			XR−J330				XR−J130				
			MEXK/EA	MEXK/EB	NBXK	MEZIXK/DI	MEXK/EA	MEXK/EB	NBXK	MEZIXK/DI	
	1	AF assy	AWZ7342	AWZ7342	AWZ7342	AWZ7343	AWZ7339	AWZ7339	AWZ7339	AWZ7340	
	2	VR assy	AWZ7355	AWZ7355	AWZ7355	AWZ7356	AWZ7352	AWZ7352	AWZ7352	AWZ7353	
	3	SECONDARY assy	AWZ7368	AWZ7368	AWZ7368	AWZ7369	AWZ7365	AWZ7365	AWZ7365	AWZ7366	
	4	PRIMARY assy	AWZ7460	AWZ7460	AWZ7460	AWZ7461	AWZ7455	AWZ7455	AWZ7455	AWZ7456	
	5	TUNER MODULE	AXQ7015	AXQ7015	AXQ7015	AXQ7014	AXQ3212	AXQ3212	AXQ3212	AXQ3214	
⚠	7	Fuse (T1.25A, FU1)	REK−101	REK−101	REK−101	REK−101	Not used	Not used	Not used	Not used	
⚠	7	Fuse (T1A, FU1)	Not used	Not used	Not used	Not used	REK−100	REK−100	REK−100	REK−100	
⚠	8	AC power cord	ADG1138	ADG1138	ADG1148	ADG1138	ADG1138	ADG1138	ADG1148	ADG1138	
⚠	27	Fuse (T5A/250V)	Not used	Not used	AEK1046	Not used	Not used	Not used	AEK1046	Not used	*
⚠	9	Power transformer (T)	ATS7034	ATS7034	ATS7034	ATS7034	ATS7032	ATS7032	ATS7032	ATS7032	
	12	Rear panel	ANC7166	ANC7166	ANC7167	ANC7168	ANC7137	ANC7137	ANC7164	ANC7165	
	17	Mic volume knob	AAB7045	AAB7045	AAB7045	AAB7045	Not used	Not used	Not used	Not used	
	25	Ceramic capacitor	Not used	Not used	Not used	CKDYB102K50	Not used	Not used	Not used	CKDYB102K50	
	26	Screw	Not used	Not used	Not used	ABA−115	Not used	Not used	Not used	ABA−115	

*: For AC power cord.

■ PARTS LIST FOR XR−J330/MEXK/EA

Mark	No.	Description	Parts No.
	1	AF ASSY	AWZ7342
	2	VR ASSY	AWZ7355
	3	SECONDARY ASSY	AWZ7368
	4	PRIMARY ASSY	AWZ7460
	5	TUNER MOD. (RDS)	AXQ7015
	6	POWER MODULE F50	AXQ7218
⚠	7	FUSE (T1.25A, FU1)	REK−101
⚠	8	AC POWER CORD	ADG1138
⚠	9	POWER TRANSFORMER (T)	ATS7034
NSP	10	SINGLE MECHA ASSY	RXA1672
NSP	11	CHASSIS	ANA7014
	12	REAR PANEL	ANC7166
	13	CD HOLDER	ANG7013
	14	RUBBER SHEET	AEB1111
	15	STRAIN RELIEF	CM−22B
	16	VOLUME KNOB	AAB7043
	17	MIC VOLUME KNOB	AAB7045
	18	VOLUME LENS	AAK7108
	19	CD TRAY CAP	AAK7110
	20	SCREW	ASZ40P060FMC
	21	SCREW	BBZ30P080FZK
	22	SCREW	BBZ30P200FMC
	23	BINDER	Z09−056
	24	CAUTION LABEL (G)	VRW−329



2.4 EXTERIOR (3/3)

■ CONTRAST OF XR−J330/MEXK/EA, MEXK/EB, NBXK, MEZIXK/DI, XR−J130/MEXK/EA, MEXK/EB, NBXK AND MEZIXK/DI.

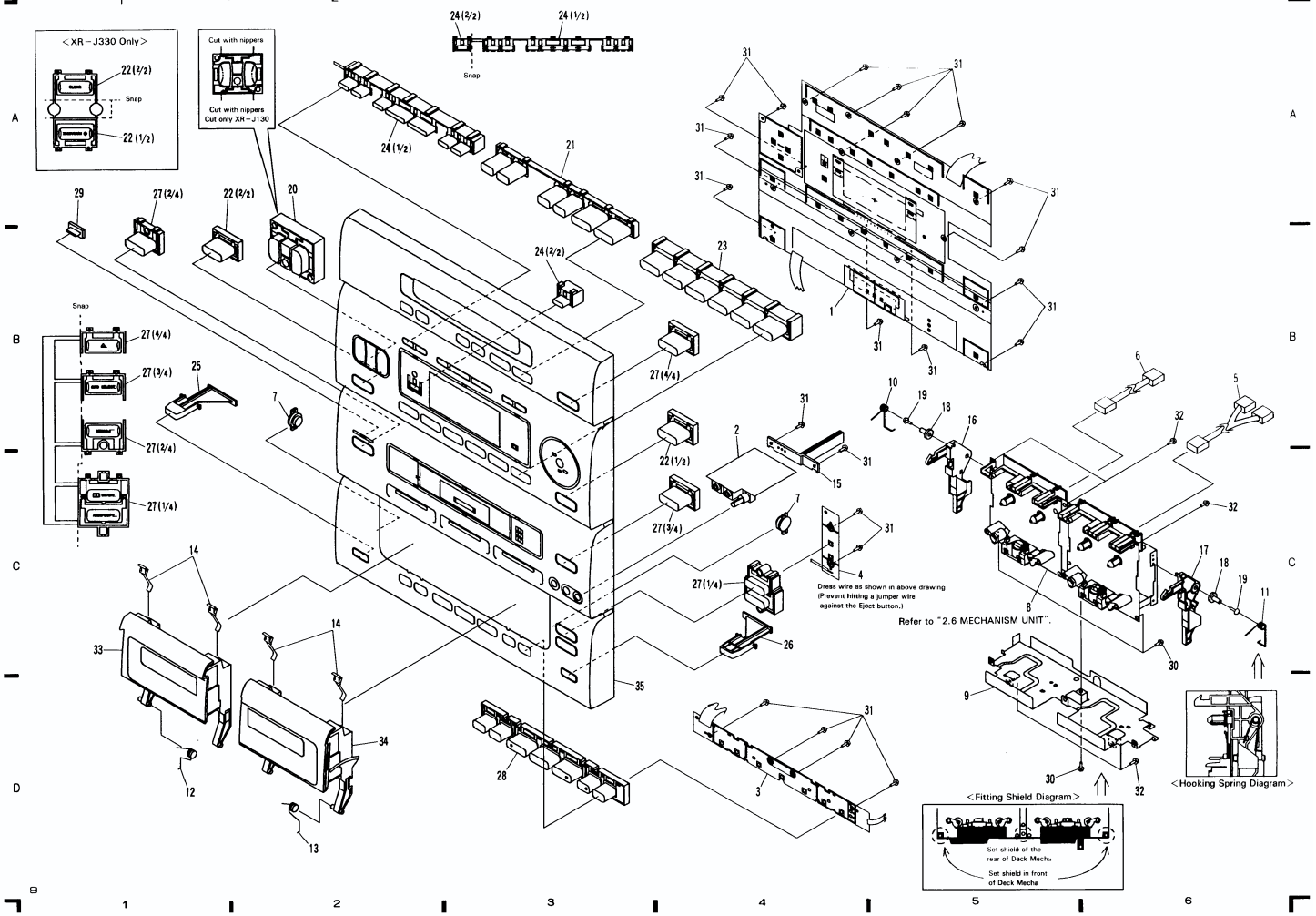
XR−J330/MEXK/EA, MEXK/EB, NBXK, MEZIXK/DI, XR−J130/MEXK/EA, MEXK/EB, NBXK and MEZIXK/DI have the same construction except for the following:

Mark	No.	Description	Part No.								Remarks
			XR−J330				XR−J130				
			MEXK/EA	MEXK/EB	NBXK	MEZIXK/DI	MEXK/EA	MEXK/EB	NBXK	MEZIXK/DI	
	1	DISPLAY assy	AWZ7434	AWZ7434	AWZ7434	AWZ7435	AWZ7431	AWZ7431	AWZ7431	AWZ7432	
	2	H. P MIC assy	AWZ7440	AWZ7440	AWZ7440	AWZ7441	AWZ7437	AWZ7437	AWZ7437	AWZ7438	
	22	Karaoke button assy	AAD7138	AAD7138	AAD7138	AAD7138	Not used	Not used	Not used	Not used	
	35	Front panel	AMB7169	AMB7169	AMB7169	AMB7169	AMB7168	AMB7168	AMB7168	AMB7168	

■ PARTS LIST FOR XR−J330/MEXK/EA

Mark	No.	Description	Parts No.
	1	DISPLAY ASSY	AWZ7434
	2	H. P MIC ASSY	AWZ7440
	3	DECK SW 1 ASSY	AWZ7443
	4	DECK SW 2 ASSY	AWZ7449
	5	CONNECTOR ASSY 5P (J1)	ADX7045
	6	CONNECTOR ASSY 3P (J2)	ADX7046
	7	DAMPER ASSY	AXA7021
	8	MECHANISM UNIT	RYM1235
NSP	9	SHIELD	ANK7007
	10	SPRING (L)	ABH7028
	11	SPRING (R)	ABH7029
	12	DOOR SPRING L	ABH7030
	13	DOOR SPRING R	ABH7031
	14	SPRING	RBK1004
	15	MIC HOLDER	AMR7023
	16	EJECT ARM (L)	AMR7024
	17	EJECT ARM (R)	AMR7025
	18	COLLAR	RNK2135
	19	SCREW	BSZ20P120FMC
	20	P. BASS BUTTON	AAD7136
	21	CD BUTTON	AAD7137
	22	KARAOKE BUTTON ASSY	AAD7138
	23	FUNCTION BUTTON	AAD7139
	24	TIMER BUTTON	AAD7140
	25	EJECT BUTTON L	AAD7141
	26	EJECT BUTTON R	AAD7142
	27	POWER BUTTON	AAD7143
	28	DECK BUTTON ASSY	AAD7144
	29	STANDBY LENS	AAK7107
	30	SCREW	BBZ30P060FZK

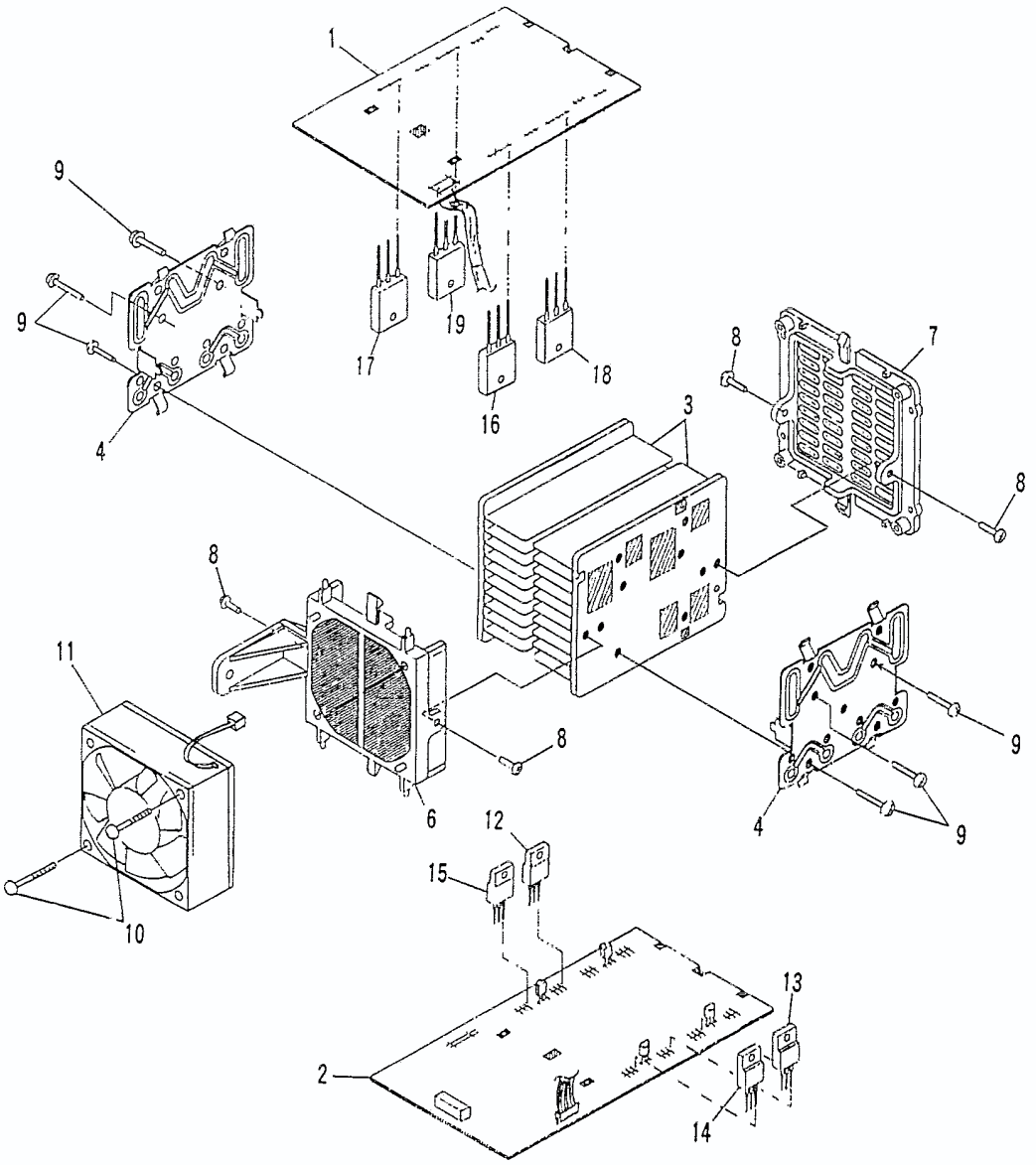
Mark	No.	Description	Parts No.
	31	SCREW	BPZ26P080FMC
	32	SCREW	VPZ30P080FZK
	33	DOOR−L	AAN7055
	34	DOOR−R	AAN7056
	35	FRONT PANEL	AMB7169



2.5 POWER MODULE F50 (FOR ALL MODELS)

Parts List

Mark	No.	Description	Parts No.
	1	FRONT 50W ASSY	AWZ7561
	2	REGULATOR ASSY	AWZ7562
	3	HEAT SINK	ANH7009
	4	BRACKET	ANG1868
	5	.....	
	6	MOLD A	AMR7005
	7	MOLD B	AMR7006
	8	SCREW (3×10)	ABA1021
	9	SCREW	BBZ30P140FZK
	10	SCREW	BPZ30P350FZK
	11	DC FAN MOTOR	AXM7003
	12	REGULATOR IC (IC7401)	NJM7812FAS
	13	REGULATOR IC (IC7402)	NJM7912FA
	14	REGULATOR IC (IC7403)	NJM7812AFS
	15	REGULATOR IC (IC7404)	NJM7805FAS
⚠	16	TRANSISTOR (Q7511)	2SA1263N
⚠	17	TRANSISTOR (Q7512)	2SA1263N
⚠	18	TRANSISTOR (Q7513)	2SC3180N
⚠	19	TRANSISTOR (Q7514)	2SC3180N



Note: Ensure that silicon grease does not adhere to the MOLD A (No. 6) and MOLD B (No. 7).

2.6 MECHANISM UNIT (FOR ALL MODELS)

● Mechanism unit Ⅰ and Ⅱ (1/2)

Parts List

Mark	No.	Description	Parts No.
	1	ASSY MOTOR	RXM1080
NSP	2	JUMPER WIRE	RDD1012
	3	BRACKET MOTOR	RNE1830
	4	SPACER	RNK1822
	5	SCREW	RBA1100
	6	SCREW	PCZ20P040FMC

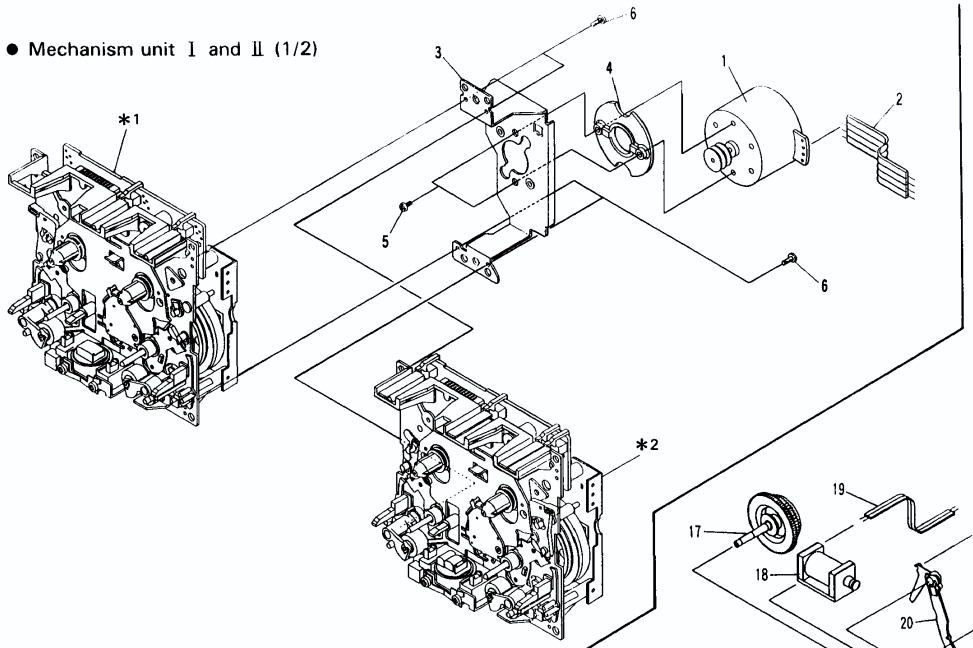
● Mechanism unit Ⅰ and Ⅱ (2/2)

Parts List

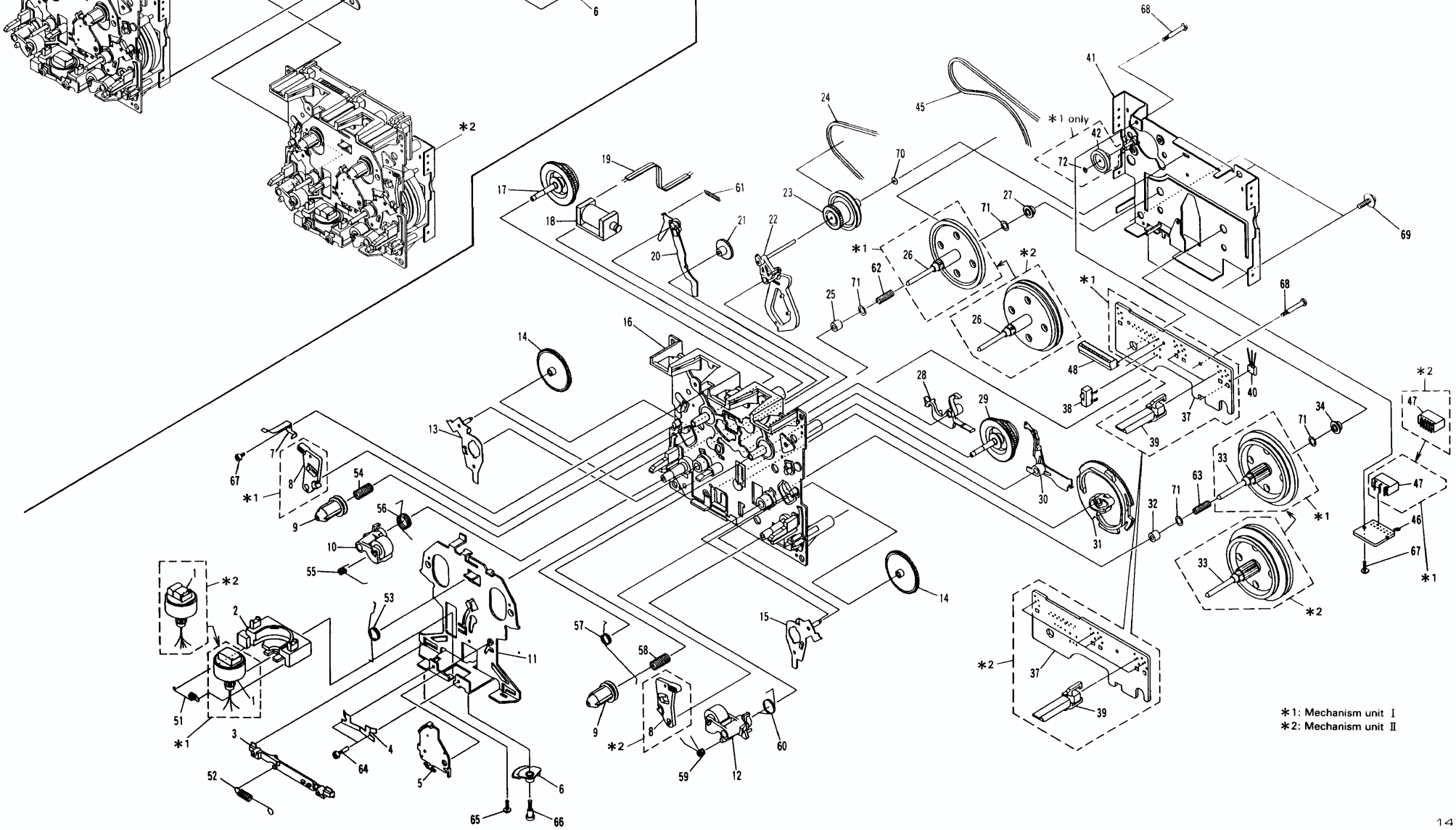
Mark	No.	Description	Parts No.
	1	ASSY HOLDER HEAD (*1)	RXA1400
	1	ASSY HOLDER HEAD (*2)	RXA1664
	2	FRAME HEAD	RNK1715
	3	LEVER HEAD	RNK1716
	4	SPRING AZIMUTH	RBK1006
	5	ASSY ARM ASSIST	RXA1401
	6	GEAR ARM HEAD	RNK1717
	7	SPRING CASSETTE	RBK1039
	8	EJECT LOCK	RNK1718
	9	CAP REEL	RNK1719
	10	ASSY PINCH ARM L	RXA1403
	11	CHASSIS HEAD	RNE1437
	12	ASSY PINCH ARM R	RXA1404
	13	ARM PLAY L	RNK1866
	14	GEAR PLAY	RNK1867
	15	ARM PLAY R	RNK1868
	16	CHASSIS OS	RXA1411
	17	ASSY SUB REEL L	RXA1407
	18	SOLENOID	RXP1020
	19	WIRE	RDC1006
	20	ARM RVS	RNK1721
	21	GEAR FF	RNK1723
	22	ASSY ARM FR	RXA1412
	23	ASSY PULLEY FR	RXA1413
	24	BELT FR	REB1158
	25	METAL	RNG1048
	26	ASSY FLYWHEEL L (*1)	RXA1666
	26	ASSY FLYWHEEL L2 (*2)	RXA1668
	27	METAL	RNG1005
	28	ARM BRAKE	RNK1724
	29	ASSY SUB REEL R	RXA1408
	30	ARM TRIGER	RNK1722
	31	GEAR CAM	RNK1725
	32	METAL	RNG1049
	33	ASSY FLYWHEEL R (*1)	RXA1667
	33	ASSY FLYWHEEL R2 (*2)	RXA1669
	34	METAL	RNG1004
	35	.....	
	36	.....	
	37	P. C. BOARD	RNP1610
	38	SWITCH MODE	RSN1020
	39	SWITCH (LEAF)	RSN1019
	40	HALL IC	DN6851A
	41	ASSY BRACKET (*1)	RXA1665
	41	BRACKET FW (*2)	RNE1438
	42	PULLEY (*1 only)	RNK2132
	43	.....	
	44	.....	
	45	BELT MAIN (*1)	REB1273
	45	BELT MAIN (*2)	REB1272
	46	P. C. BOARD	RNP1348
	47	HOUSING (*1)	RKP1396
	47	HOUSING (*2)	RKP1397
	48	CONNECTOR (*1)	RKP1713
	48	CONNECTOR (*2)	RKP1714
	49	.....	
	50	.....	
	51	SPRING	RBH1282
	52	SPRING	RBH1283
	53	SPRING	RBH1284
	54	SPRING	RBH1286
	55	SPRING	RBH1288
	56	SPRING	RBH1291
	57	SPRING	RBH1285
	58	SPRING	RBH1287
	59	SPRING	RBH1289
	60	SPRING	RBH1290
	61	SPRING	RBH1292
	62	FWP SP (SPRING)	RBH1061
	63	SPRING	RBH1325
	64	SCREW (FOR AZIMUTH)	RBA1023
	65	SCREW	RBA1027
	66	SCREW	RBA1030
	67	SCREW	PCZ20P040FMC
	68	SCREW	RBA1093
	69	SCREW	RBA1094
	70	WASHER	RBF1046
	71	WASHER	WA26D047D013
	72	WASHER (*1 only)	WT13D030D025

Note)
**1: Mechanism Unit Ⅰ*
**2: Mechanism Unit Ⅱ*

● Mechanism unit I and II (1/2)



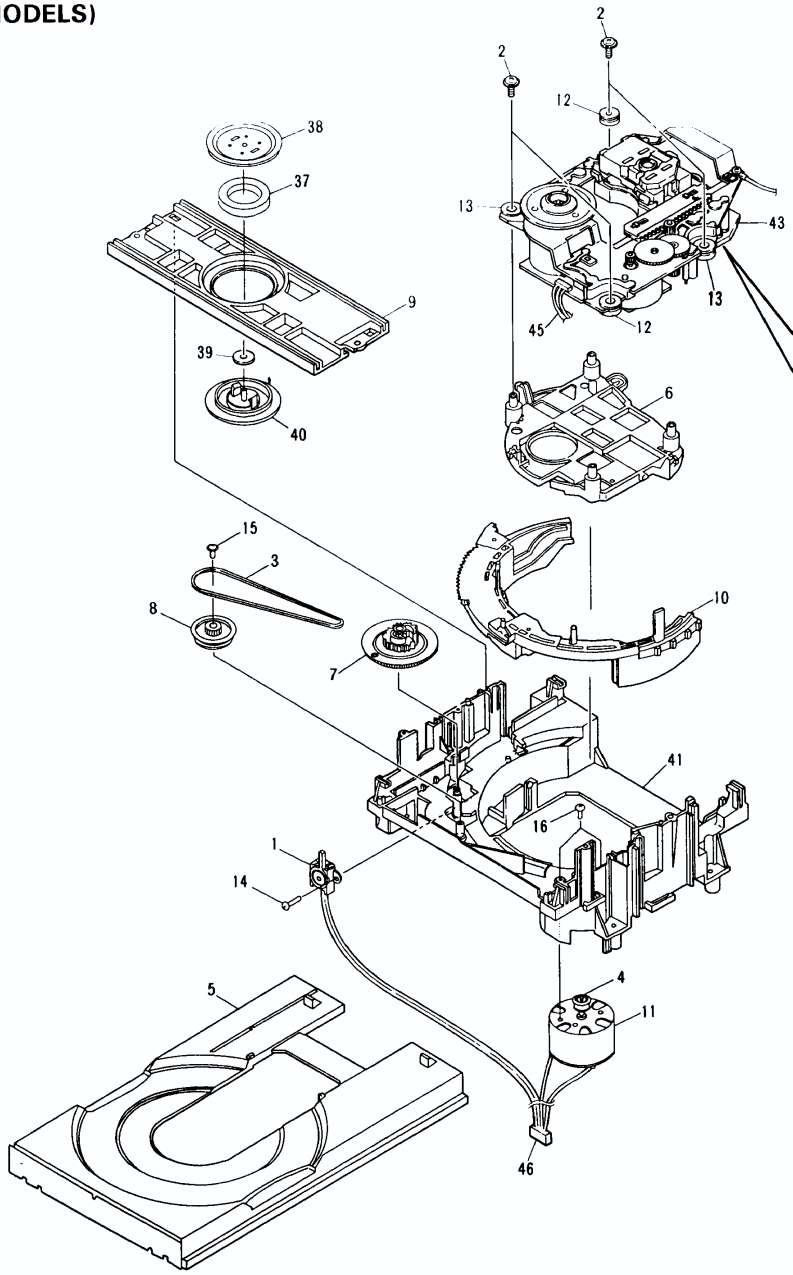
● Mechanism unit I and II (2/2)



2.7 SINGLE MECHA ASSY (FOR ALL MODELS)

Parts List

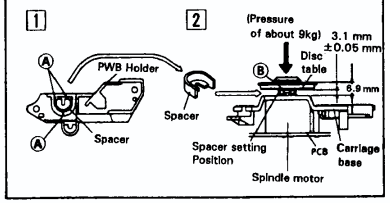
Mark	No.	Description	Parts No.
	1	LEVER SWITCH (CLAMP, S601)	DSK1003
	2	FLOAT SCREW	PBA1048
	3	RUBBER BELT	PEB1193
	4	MOTOR PULLEY	PNW1634
	5	TRAY	PNW2455
	6	FROAT BASE	PNW2032
	7	DRIVE GEAR 2	PNW2369
	8	GEAR PULLEY	PNW2034
	9	CLAMPER BASE	PNW2375
	10	CLAMP CAM	PNW2364
	11	DC MOTOR/0.75W (LOADING)	PXM1010
	12	FLOAT RUBBER	PEB1014
	13	FLOAT RUBBER	PEB1132
	14	SCREW	BPZ26P100FMC
	15	SCREW	Z39−019
	16	SCREW	PMZ26P040FMC
	17	PINION GEAR	PNW2055
NSP	18	DC MOTOR (CARRIAGE)	PXM1027
	19	DC MOTOR ASSY (SPINDLE)	PEA1235
	20	CARRIAGE BASE	PNW2445
	21	DISC TABLE	PNW1608
	22	SCREW	JFZ20P030FNI
	23	SCREW	JFZ17P025FZK
	24	GEAR 3	PNW2054
	25	GEAR 2	PNW2053
	26	WASHER	WT12D032D025
	27	PICKUP ASSY	PEA1291
	28	GUIDE BAR	PLA1094
	29	GEAR 1	PNW2052
NSP	30	GEAR STOPPER	PNB1303
	31	SCREW	BPZ20P060FMC
	32	PWB HOLDER	PNW2057
	33	SCREW	BPZ26P100FMC
	34	EARTH LEAD UNIT	PDF1104
	35	SCREW	BBZ26P060FMC
NSP	36	MECHANISM BOARD ASSY	PWX1192
	37	CLAMP MAGNET	PMF1014
	38	YOKE	PNB1216
NSP	39	H RUBBER	PEB1249
	40	CLAMPER S	PNW1609
	41	LOADING BASE	PNW2376
	42	DC MOTOR ASSY (CARRIAGE)	PEA1246
NSP	43	SERVO MECHANISM ASSY	AXA7017
	44	.....	
	45	CONNECTOR ASSY (4P)	PDE1238
	46	CONNECTOR ASSY (5P)	PDE1239

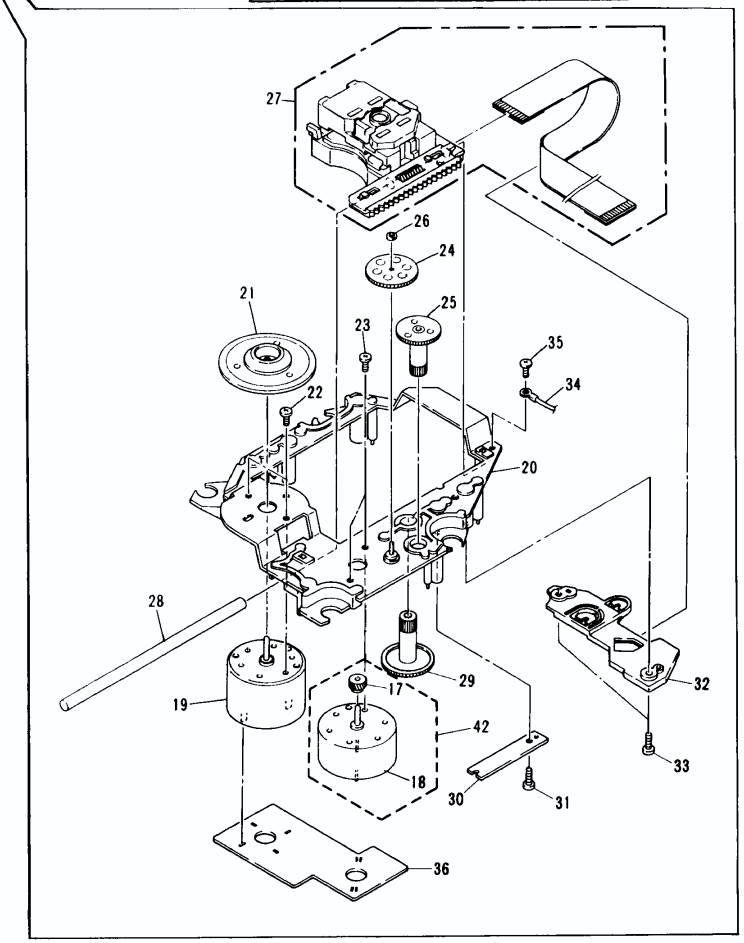


● How to install the disc table

1 Use nipper or other tool to cut the three sections marked Ⓐ figure 1. Then remove the spacer.

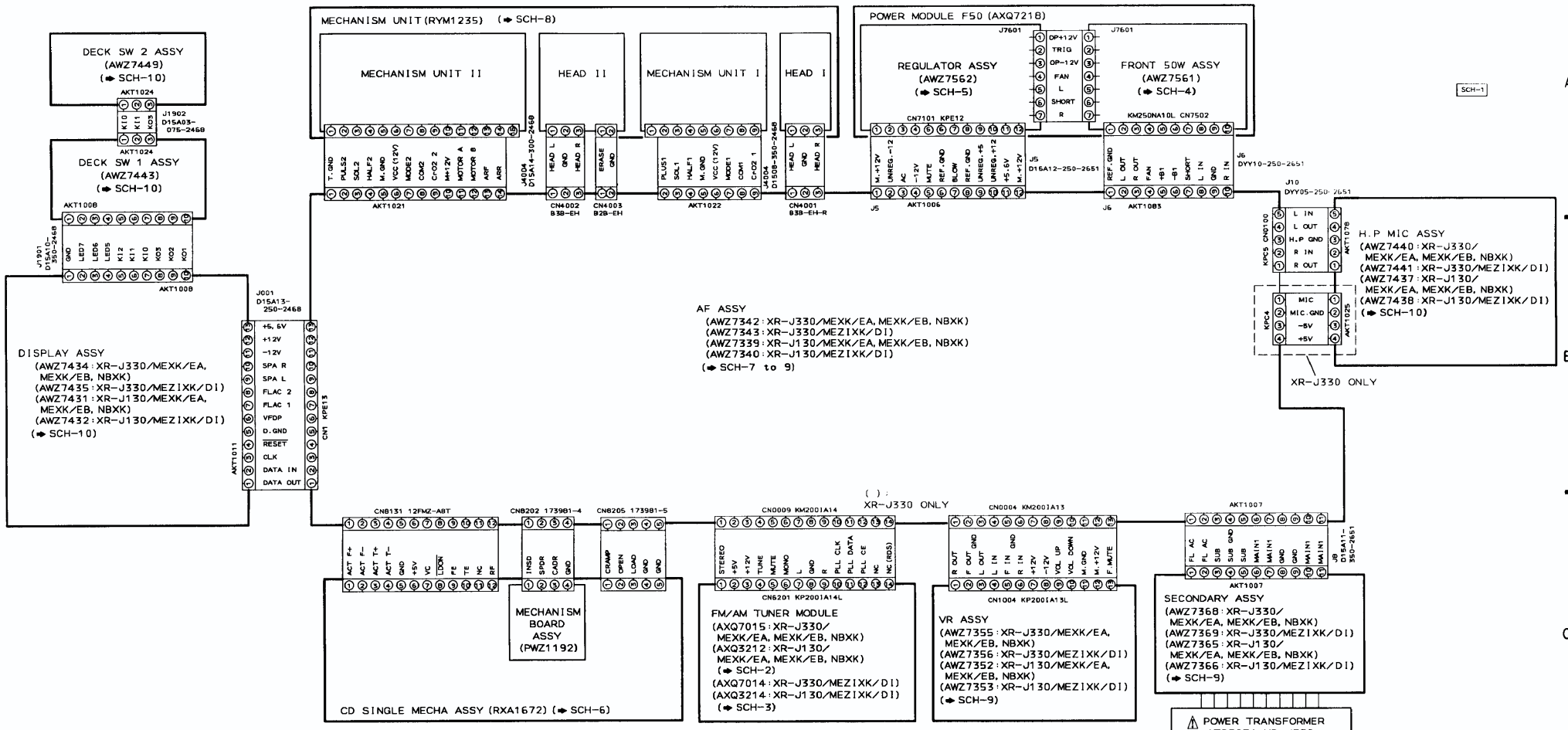
2 While supporting the spindle motor shaft with the stopper, put spacer on top of the motor base (angled so it doesn't touch section Ⓑ), and stick the disc table on top (takes about 9kg pressure). Take off the spacer.





3. SCHEMATIC AND PCB CONNECTION DIAGRAMS

3.1 OVERALL SCHEMATIC DIAGRAM


MECHANISM UNIT (RYM1235) (➡ SCH-8)
MECHANISM UNIT II
HEAD II
MECHANISM UNIT I
HEAD I
POWER MODULE F50 (AXQ7218)
REGULATOR ASSY (AWZ7562) (➡ SCH-5)
FRONT 50W ASSY (AWZ7561) (➡ SCH-4)
DECK SW 2 ASSY (AWZ7449) (➡ SCH-10)
DECK SW 1 ASSY (AWZ7443) (➡ SCH-10)
DISPLAY ASSY (AWZ7434 : XR-J330/MEXK/EA, MEXK/EB, NBXK) (AWZ7435 : XR-J330/MEZIXK/DI) (AWZ7431 : XR-J130/MEXK/EA, MEXK/EB, NBXK) (AWZ7432 : XR-J130/MEZIXK/DI) (➡ SCH-10)
AF ASSY (AWZ7342 : XR-J330/MEXK/EA, MEXK/EB, NBXK) (AWZ7343 : XR-J330/MEZIXK/DI) (AWZ7339 : XR-J130/MEXK/EA, MEXK/EB, NBXK) (AWZ7340 : XR-J130/MEZIXK/DI) (➡ SCH-7 to 9)
H.P MIC ASSY (AWZ7440 : XR-J330/MEXK/EA, MEXK/EB, NBXK) (AWZ7441 : XR-J330/MEZIXK/DI) (AWZ7437 : XR-J130/MEXK/EA, MEXK/EB, NBXK) (AWZ7438 : XR-J130/MEZIXK/DI) (➡ SCH-10)
XR-J330 ONLY
( ) : XR-J330 ONLY
MECHANISM BOARD ASSY (PWZ1192)
CD SINGLE MECHA ASSY (RXA1672) (➡ SCH-6)
FM/AM TUNER MODULE (AXQ7015 : XR-J330/MEXK/EA, MEXK/EB, NBXK) (AXQ3212 : XR-J130/MEXK/EA, MEXK/EB, NBXK) (➡ SCH-2) (AXQ7014 : XR-J330/MEZIXK/DI) (AXQ3214 : XR-J130/MEZIXK/DI) (➡ SCH-3)
VR ASSY (AWZ7355 : XR-J330/MEXK/EA, MEXK/EB, NBXK) (AWZ7356 : XR-J330/MEZIXK/DI) (AWZ7352 : XR-J130/MEXK/EA, MEXK/EB, NBXK) (AWZ7353 : XR-J130/MEZIXK/DI) (➡ SCH-9)
SECONDARY ASSY (AWZ7368 : XR-J330/MEXK/EA, MEXK/EB, NBXK) (AWZ7369 : XR-J330/MEZIXK/DI) (AWZ7365 : XR-J130/MEXK/EA, MEXK/EB, NBXK) (AWZ7366 : XR-J130/MEZIXK/DI) (➡ SCH-9)
POWER TRANSFORMER ATS7034 : XR-J330 ATS7032 : XR-J130
PRIMARY ASSY (AWZ7460 : XR-J330/MEXK/EA, MEXK/EB, NBXK) (AWZ7461 : XR-J330/MEZIXK/DI) (AWZ7455 : XR-J130/MEXK/EA, MEXK/EB, NBXK) (AWZ7456 : XR-J130/MEZIXK/DI) (➡ SCH-9)
AC220-230V 50Hz AC230V 50Hz
AC POWER CORD ADG1113B (MEXK/EA, MEXK/EB, MEZIXK/DI TYPES) ADG1148 (NBXK TYPE) FUSE (T5A/250V) (NBXK TYPE ONLY)

NOTE FOR SCHEMATIC DIAGRAMS (Type 1A)

1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**
2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
3. **RESISTORS:**
   Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
   Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
4. **CAPACITORS:**
   Unit: p:pF or μF unless otherwise noted.
   Ratings: capacitor (μF)/ voltage (V) unless otherwise noted.
   Rated voltage: 50V except for electrolytic capacitors.
5. **COILS:**
   Unit: m:mH or μH unless otherwise noted.
6. **VOLTAGE AND CURRENT:**
   ⊏V⊐ : Signal voltage at rated output.
   ⊏ or ⌐ V :
   DC voltage (V) at no input signal unless otherwise noted.
   Value in ( ) is DC voltage at rated power.
   ⇨ mA or ⇦ mA :
   DC current at no input signal unless otherwise noted.
7. **OTHERS:**
   • ⊘ or ❶ : Adjusting point.
   • ⊏ : Measurement point.
   • The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
8. **SCH-□ ON THE SCHEMATIC DIAGRAM:**
   • SCH-□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)
9. **SWITCHES** (Underline indicates switch position):

DISPLAY ASSY

S1801	AM TUNER	S1827	RANDOM
S1802	SFC SELECT	S1828	⏮ ◀◀ CD TRACK/MANUAL REV SEARCH
S1803	AUX		
S1804	TAPE	S1829	▶ ⏸ CD PLAY/PAUSE
S1805	KARAOKE	S1830	⏏ CD EJECT
S1809	POWER STANDBY/ON	S1831	CLOCK/CLOCK ADJ
S1810	FLAT	S1832	PGM
S1814	P.BASS (DEMO)	S1833	▶▶ ⏭ CD TRACK/MANUAL FWD SEARCH
S1815	TREBLE DOWN		
S1819	TREBLE UP	S1834	UP +
S1820	STEREO WIDE	S1835	FREQ/STATION
S1822	RDS	S1836	TIMER REC/WAKE-UP
S1823	PHONO	S1838	■ CD STOP
S1824	CD	S1839	DOWN −
S1825	FM TUNER	S1840	MONO
S1826	MEMORY		

DECK SW 1 ASSY

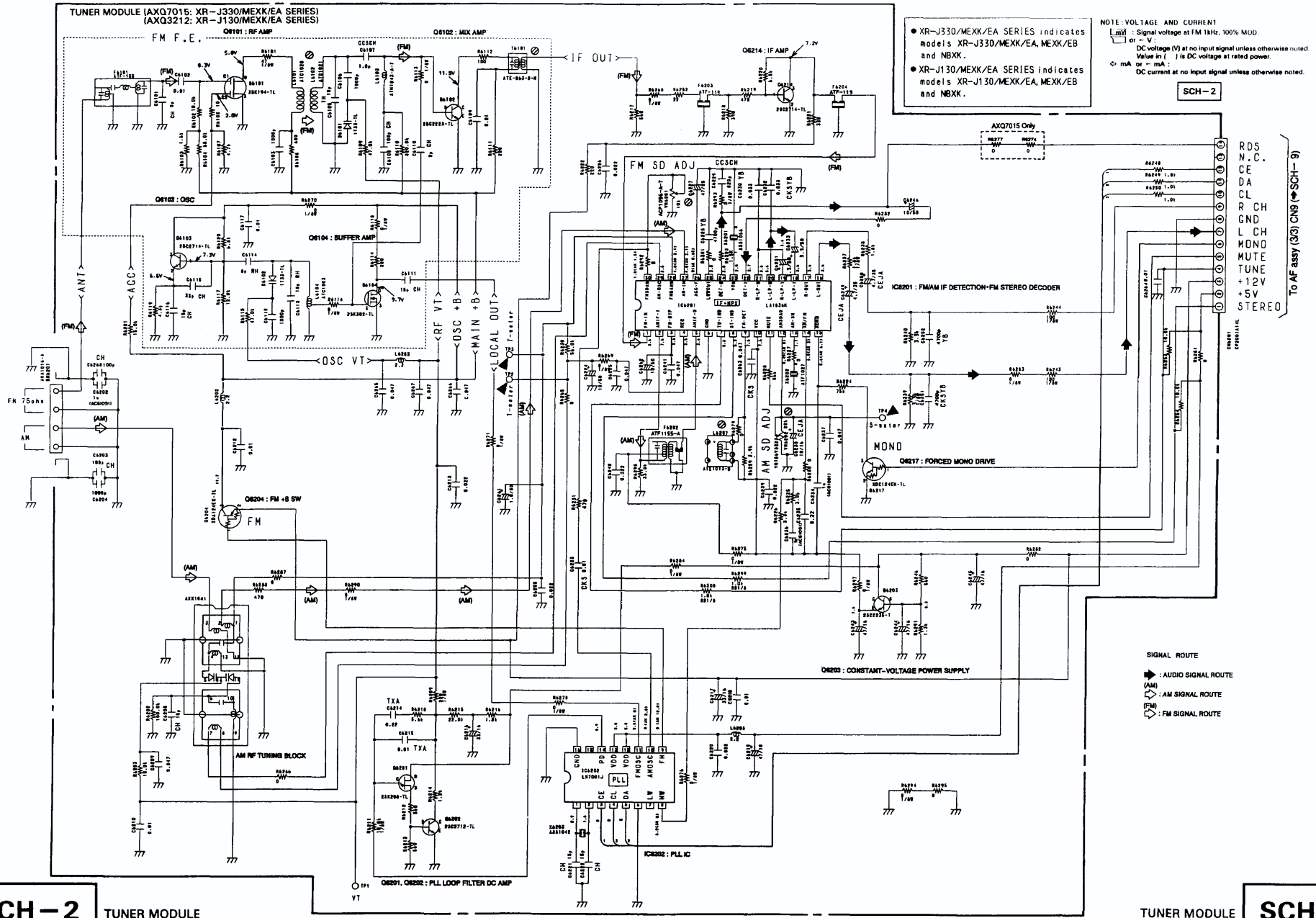
S1806	◀ DECK REV PLAY
S1807	◀◀ DECK REW
S1808	▶▶ DECK FF
S1811	■ DECK STOP
S1812	▶ DECK FWD PLAY
S1813	● DECK REC
S1818	TAPE I/II

DECK SW 2 ASSY

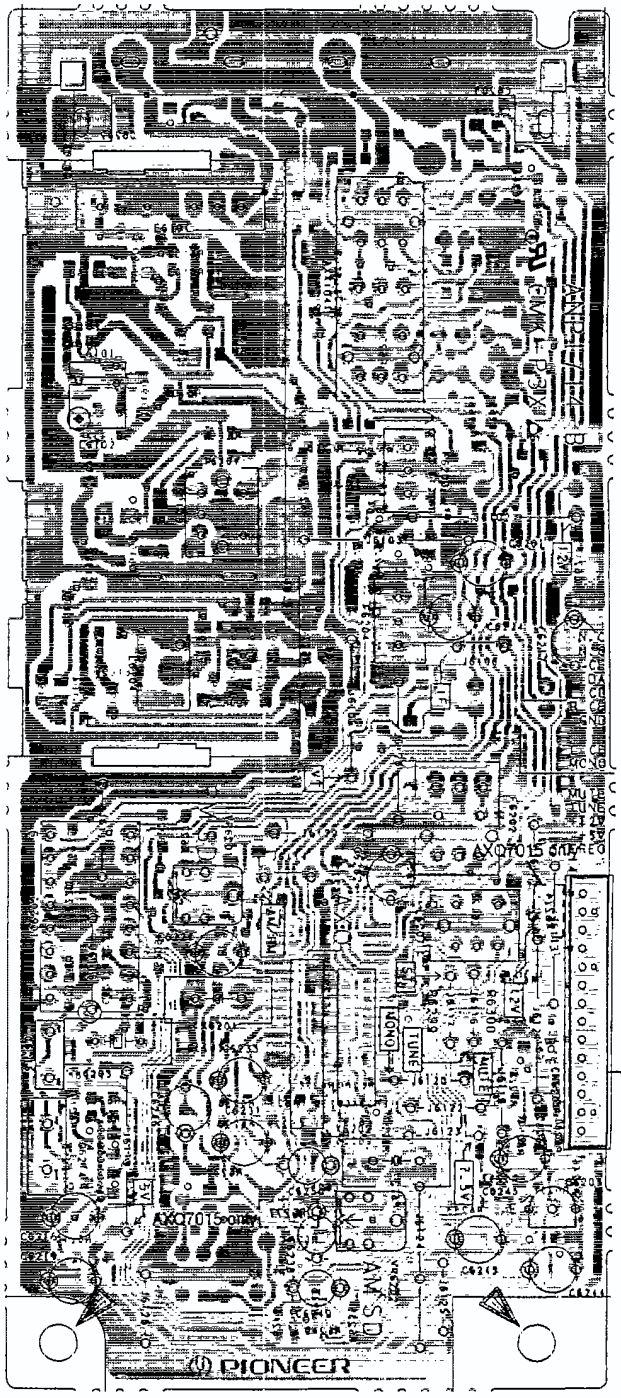
S1816	DECK A&ES/COPY
S1817	DOLBY NR ON/OFF

3.2 TUNER MODULE

● For XR−J330/MEXK/EA, MEXK/EB and NBXK (AXQ7015)
XR−J130/MEXK/EA, MEXK/EB and NBXK (AXQ3212)



TUNER MODULE (AXQ7015 and AXQ3212)



NOTE FOR PCB DIAGRAMS:

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
Q504 (E) Q504	Q504 Q504	Transistor
D203 D203	D203	Diode
C513 C513	C513	Capacitor (Polarized)

3. The transistor terminal marked with E or ⊏ shows the emitter.
4. The diode terminal marked with ◎ or ⊐ shows cathode side.
5. The capacitor terminal marked with ◎ or ⊏ shows negative terminal.

NOTE FOR PCB DIAGRAMS:

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

To AF assy CN9

• This diagram is viewed from the mounted parts side.

TUNER MODULE (AXQ7015 and AXQ3212)

• This diagram is viewed from the foil side.

PCB-2

● For XR-J330/MEZIXK/DI (AXQ7014)
XR-J130/MEZIXK/DI (AXQ3214)

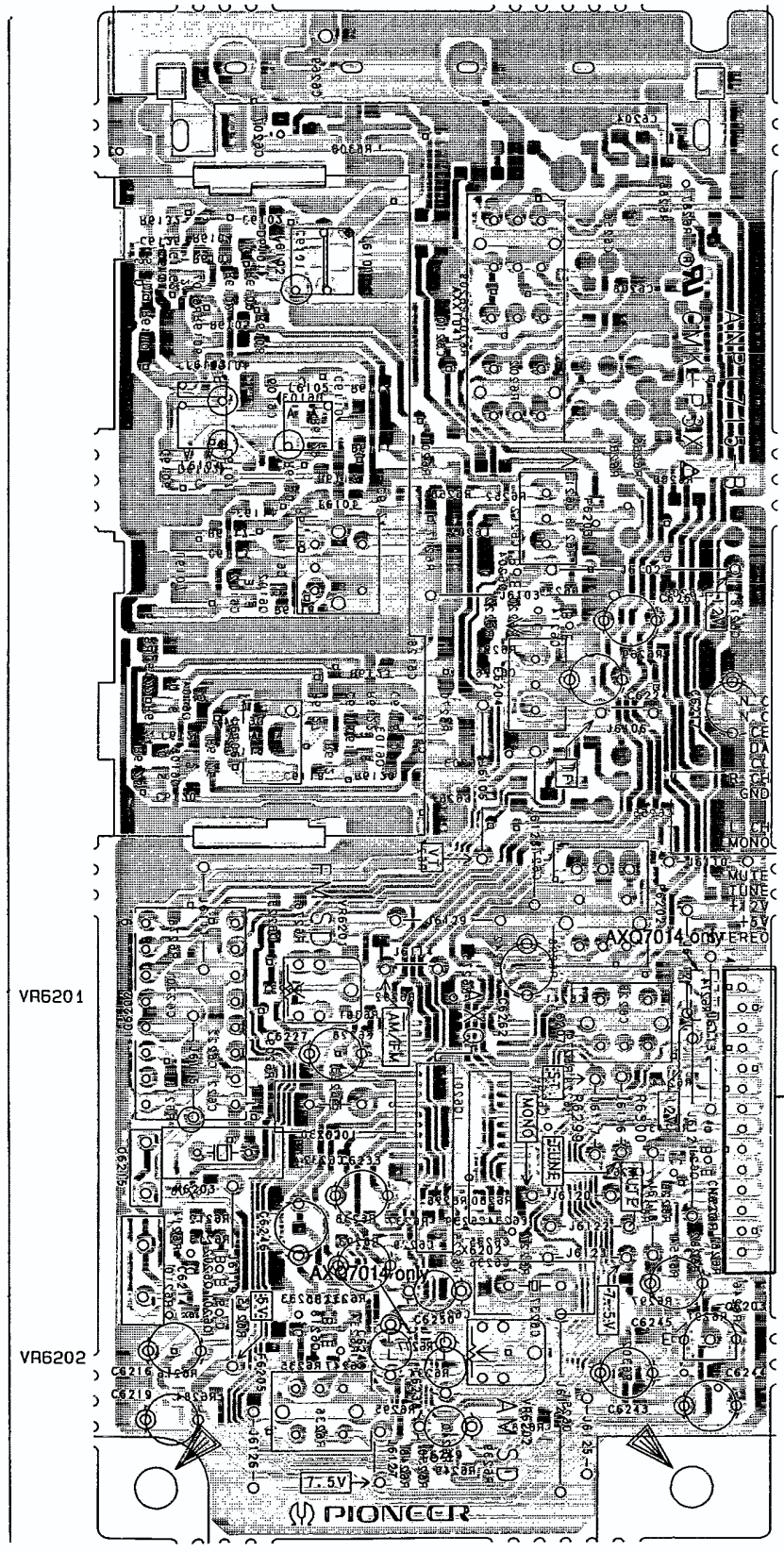
TUNER MODULE (AXQ7014 and AXQ3214)

• This diagram is viewed from the foil side.

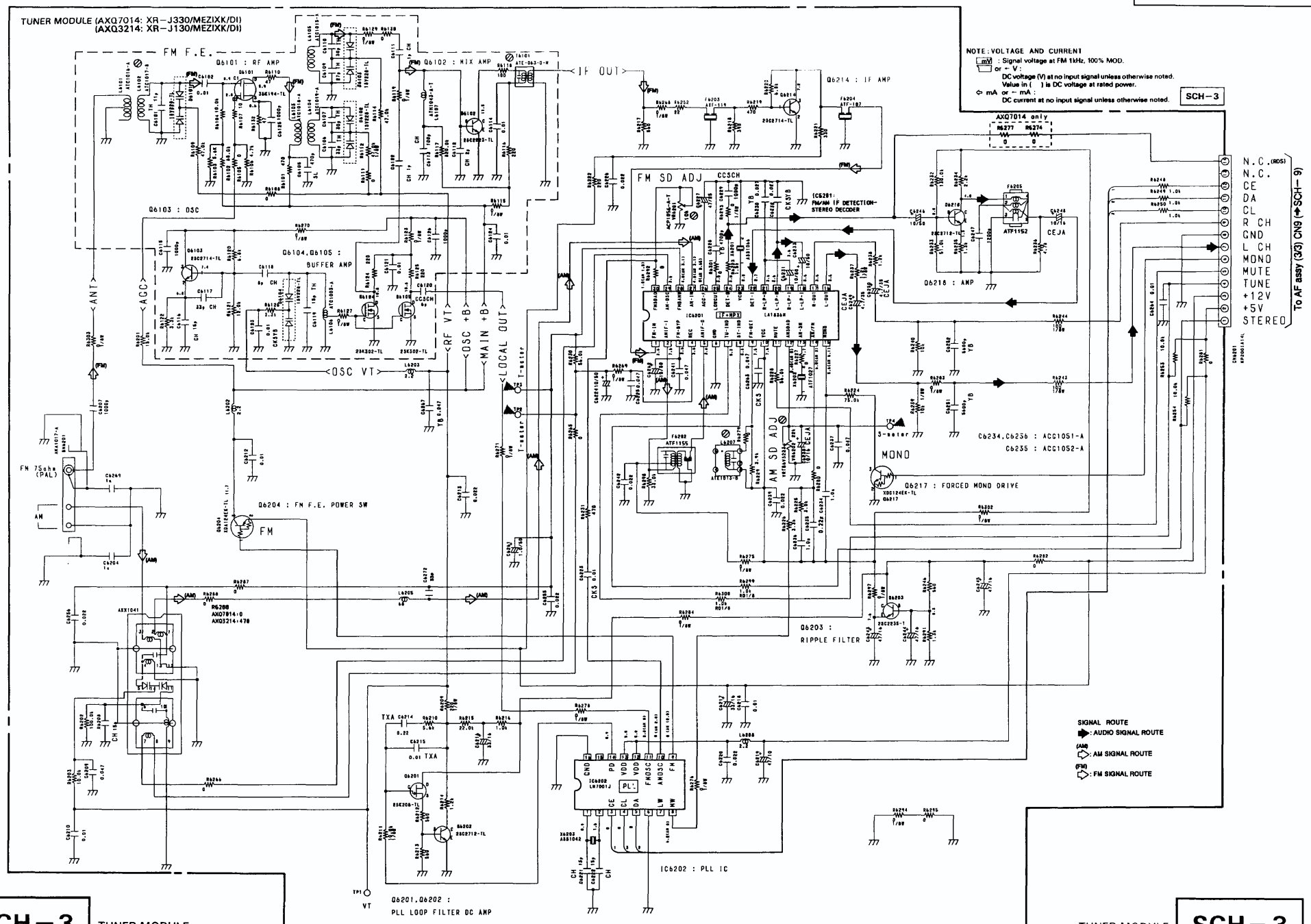
PCB–2

● For XR–J330/MEZIXK/DI (AXQ7014)
XR–J130/MEZIXK/DI (AXQ3214)

TUNER MODULE (AXQ7014 and AXQ3214)



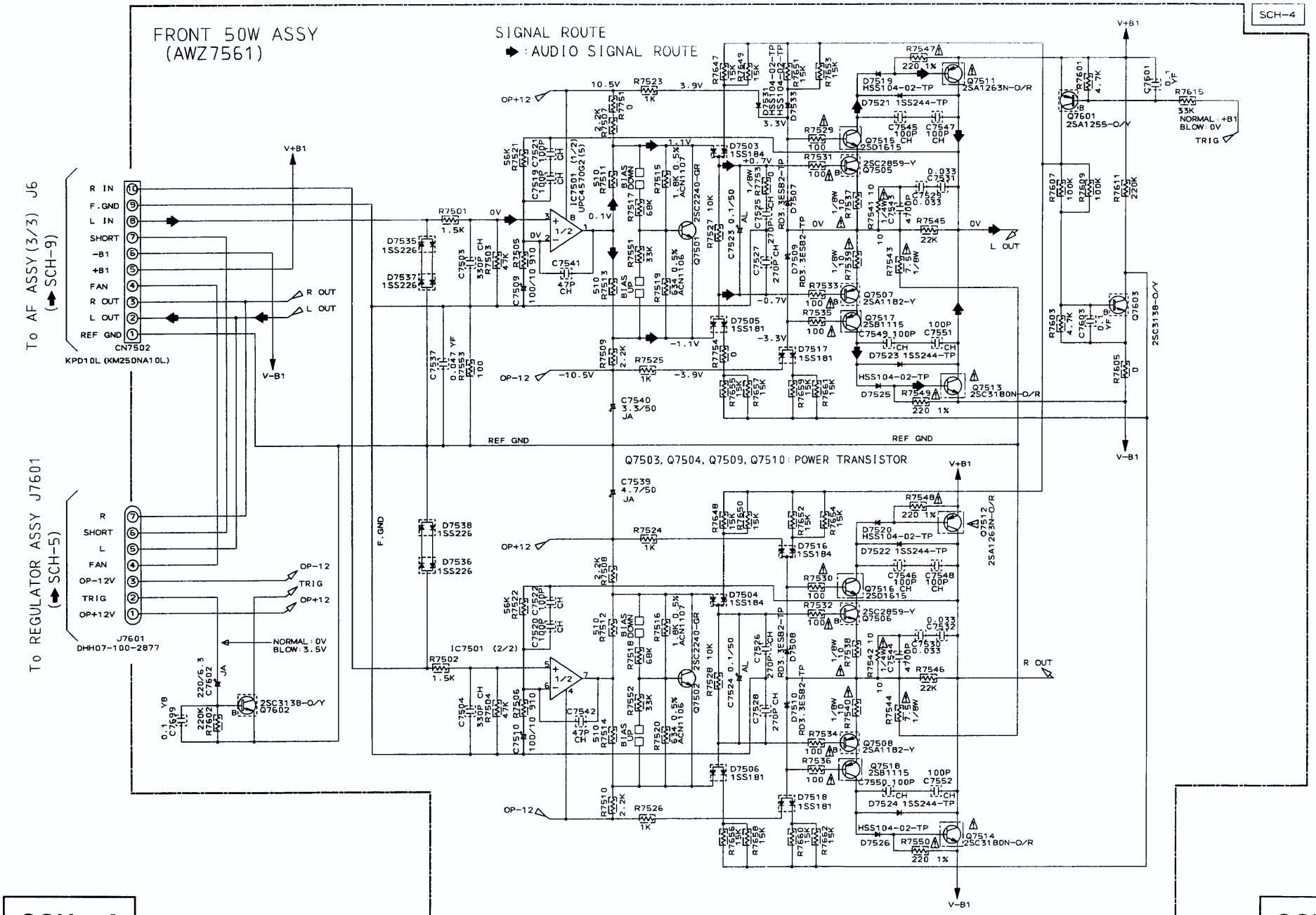
● This diagram is viewed from the mounted parts side.



SCH-3 TUNER MODULE (For AXQ7014 and AXQ3214)

TUNER MODULE (For AXQ7014 and AXQ3214) **SCH-3**

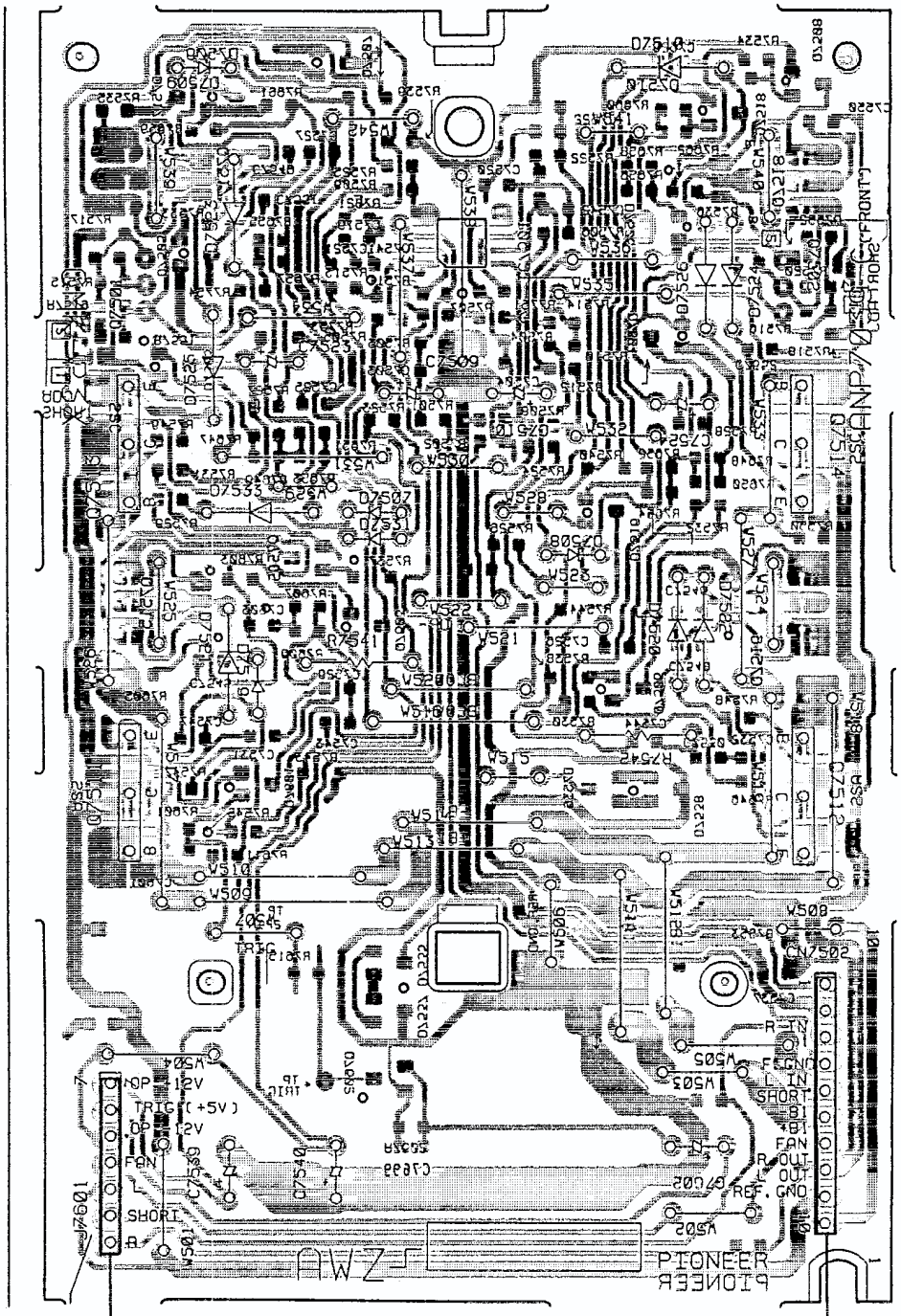
3.3 FRONT 50W ASSY



PCB-3

• This diagram is viewed from the mounted parts side.

FRONT 50W ASSY



PCB-3

- This diagram is viewed from the foil side.

3.4 REGULATOR ASSY

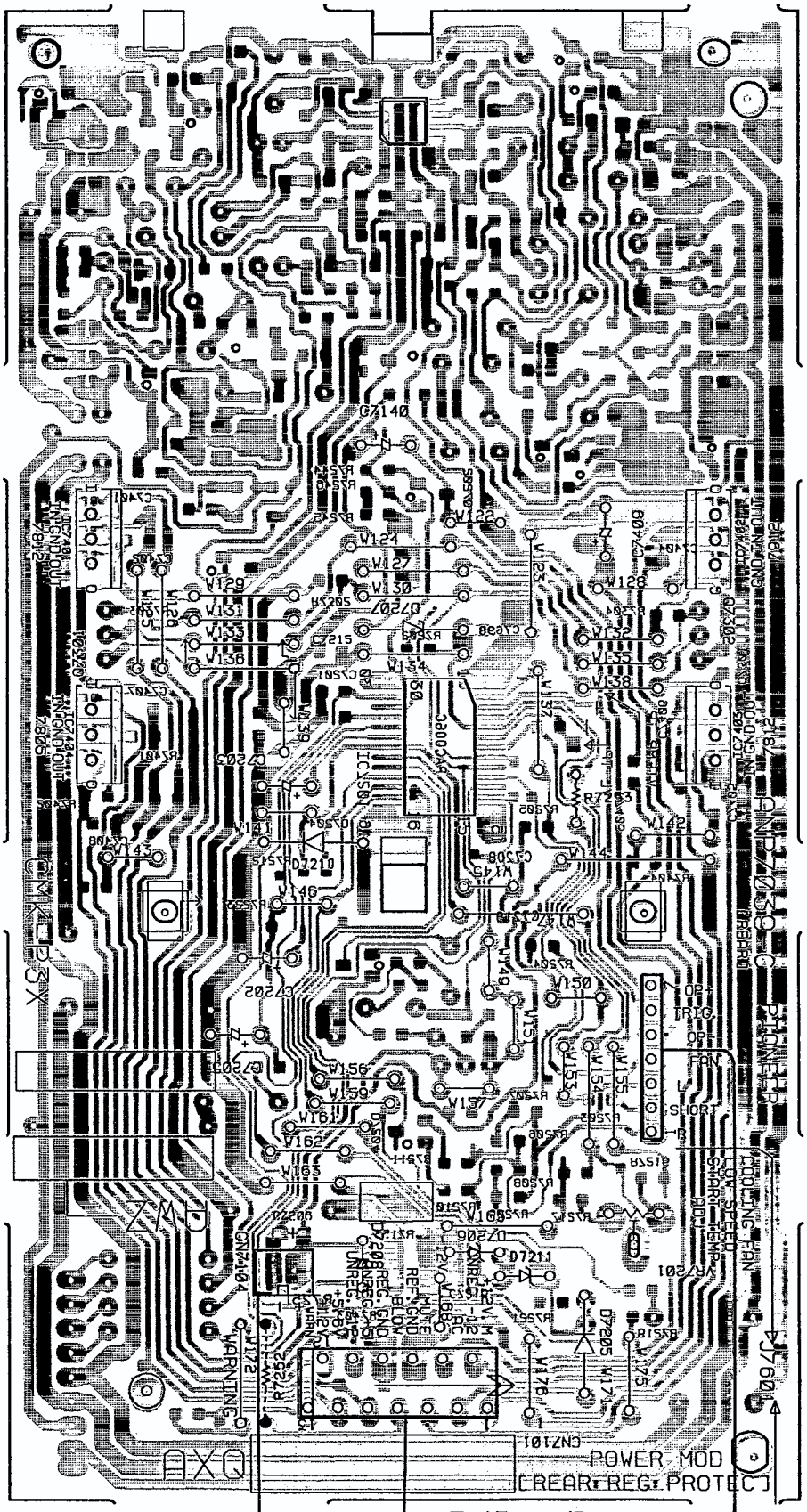
PCB-4

- This diagram is viewed from the foil side.

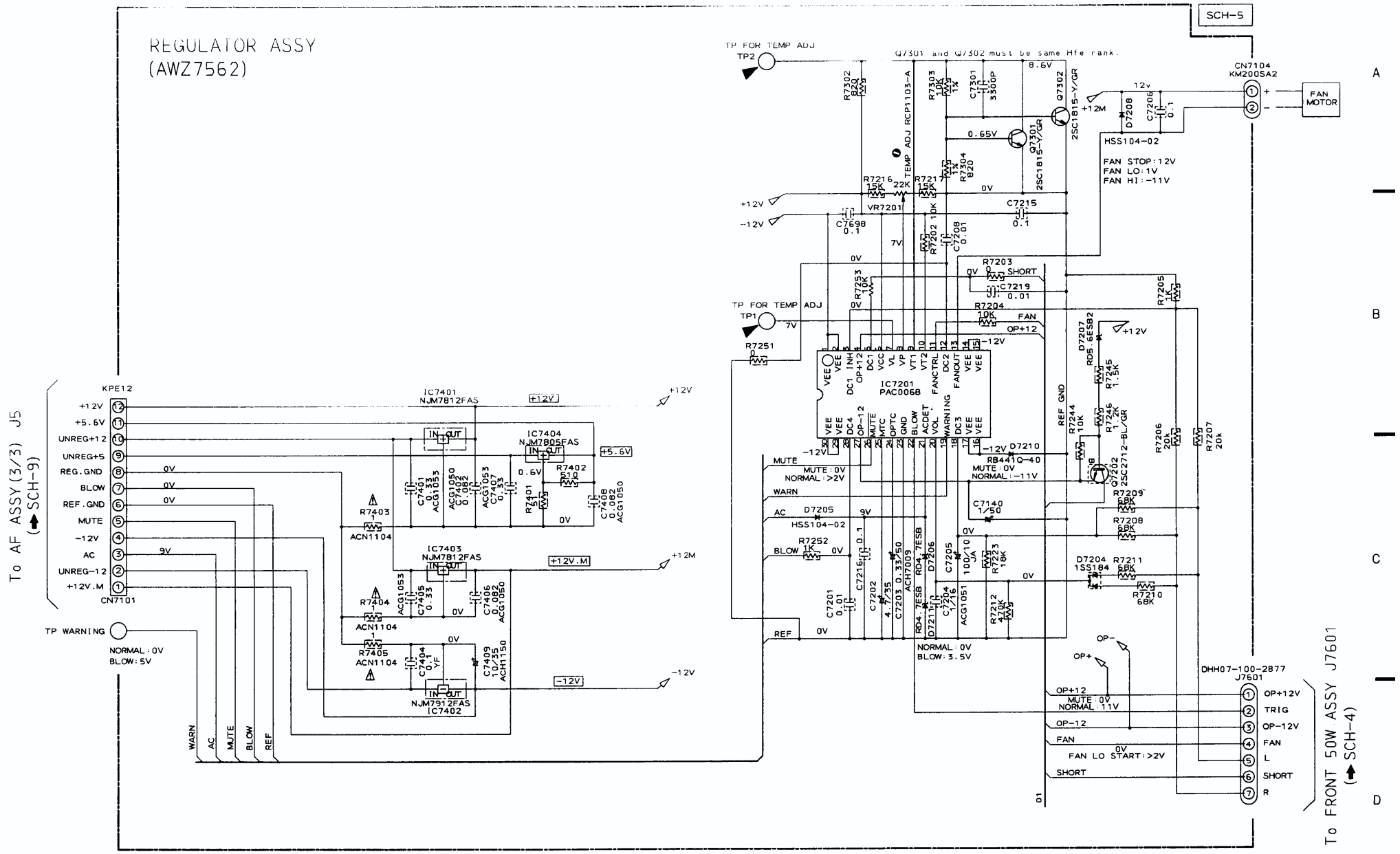
3.4 REGULATOR ASSY

• This diagram is viewed from the mounted parts side. PCB-4

REGULATOR ASSY



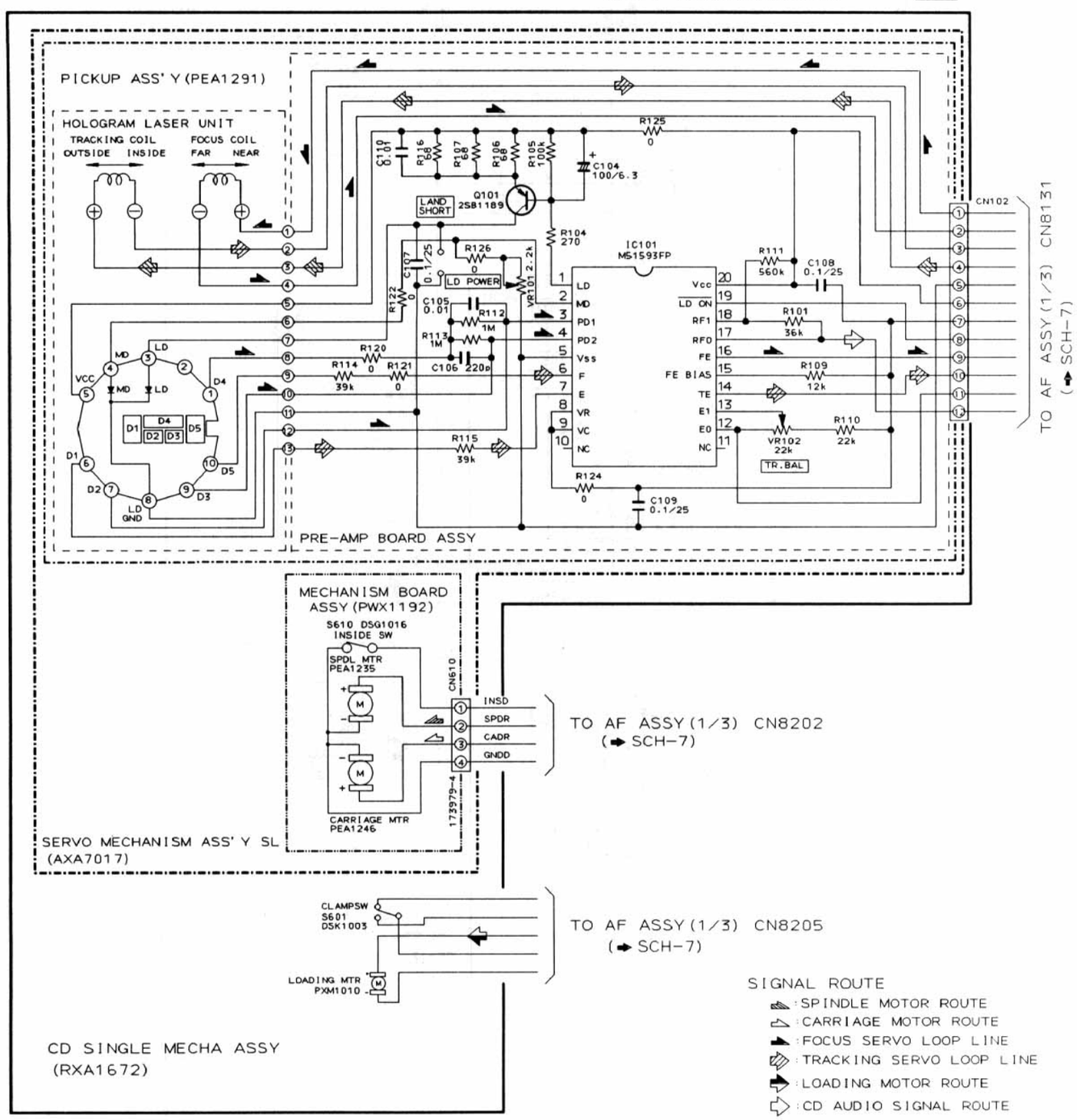
REGULATOR ASSY
(AWZ7562)



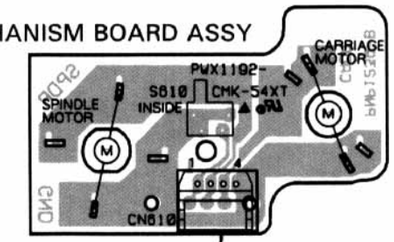
3.5 CD SINGLE MECHA ASSY
(MECHANISM BOARD ASSY)

NOTE : VOLTAGE AND CURRENT
▭ or ← V :
DC voltage (V) in PLAY mode unless otherwise noted.
⇦ mA or ← mA :
DC current in PLAY mode unless otherwise noted.
Value in ( ) is DC current in STOP mode.

SCH-6

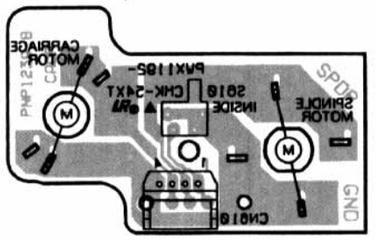


MECHANISM BOARD ASSY



To AF assy CN8202

- This diagram is viewed from the mounted parts side.

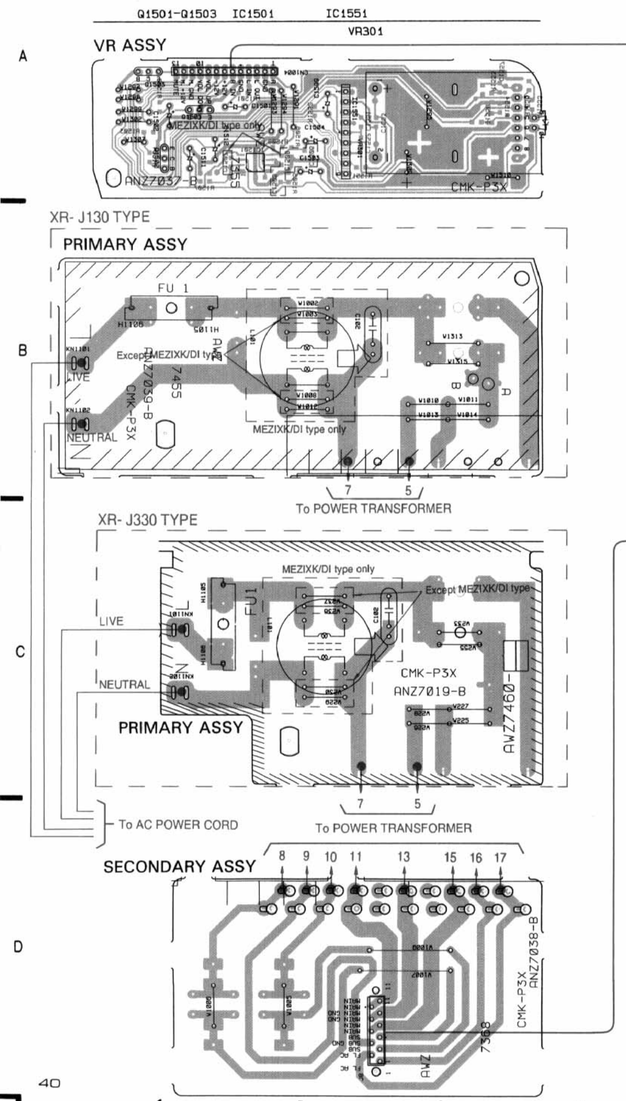


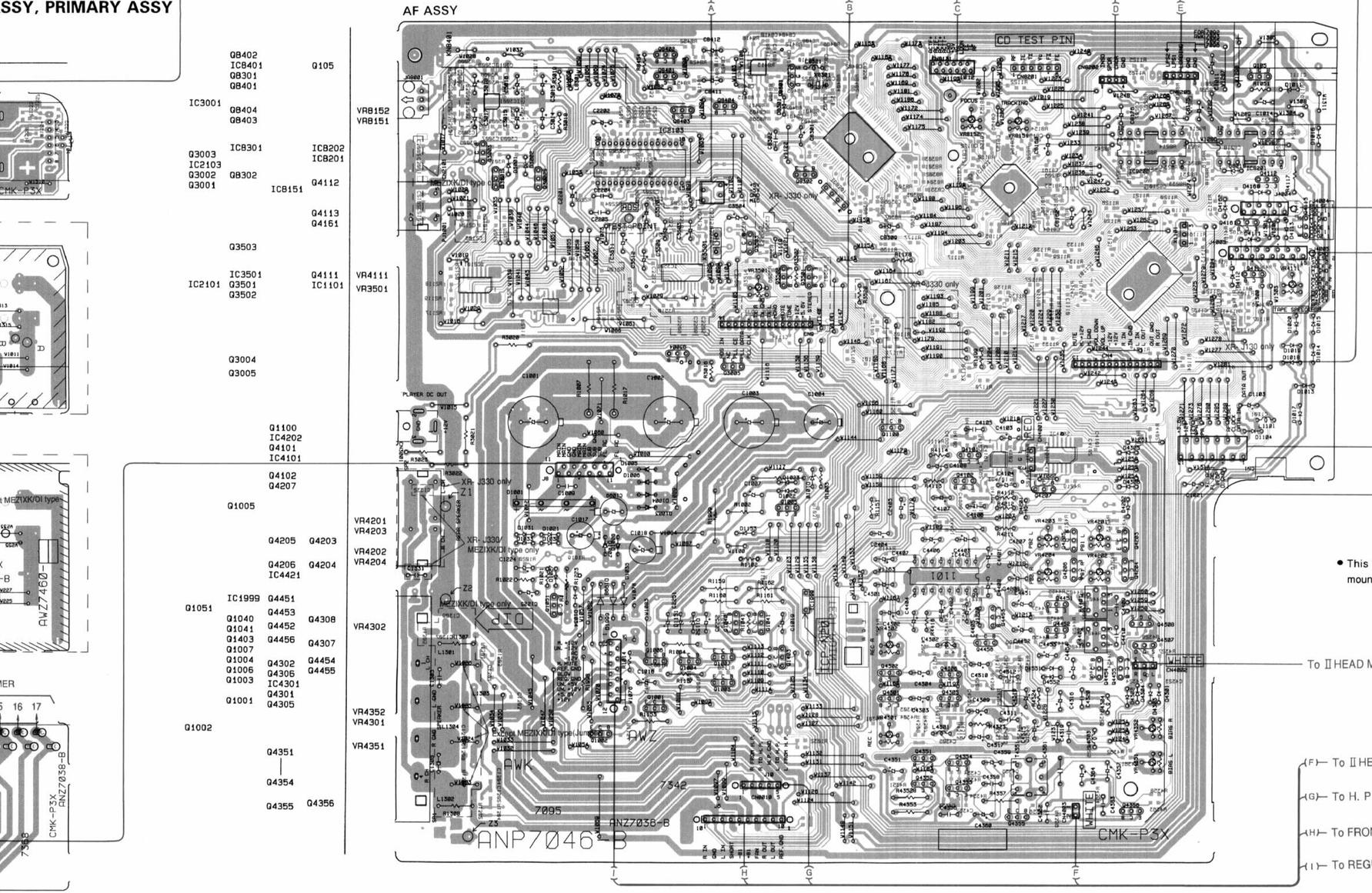
- This diagram is viewed from the foil side.

SCH – 6 CD SINGLE MECHA ASSY (MECHANISM BOARD ASSY)

3.6 AF ASSY, VR ASSY, SECONDARY ASSY, PRIMARY ASSY AND CASSETTE MECHANISM UNIT

3.6 AF ASSY, VR ASSY, SECONDARY ASSY, PRIMARY ASSY AND CASSETTE MECHANISM UNIT

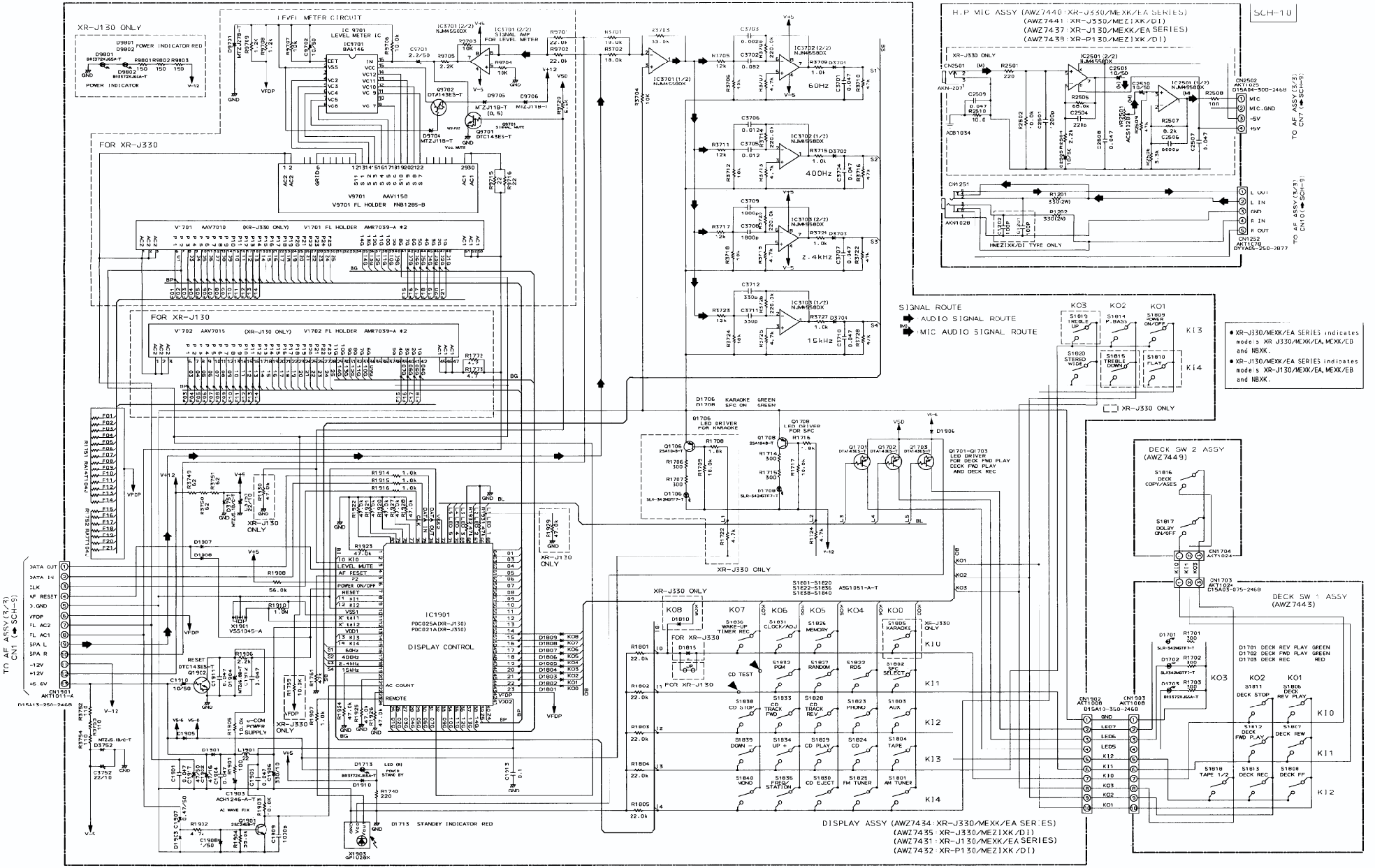




• This diagram is viewed from the mounted parts side.

PCB-6

3.7 DISPLAY ASSY, H. P MIC ASSY, DECK SW 1 ASSY AND DECK SW 2 ASSY



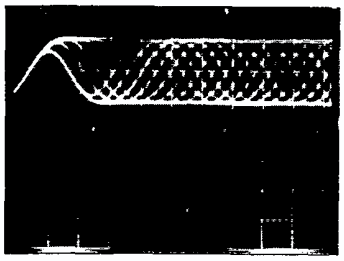
DISPLAY ASSY, H. P MIC ASSY, DECK SW 1 ASSY, DECK SW 2 ASSY SCH-10

Waveforms

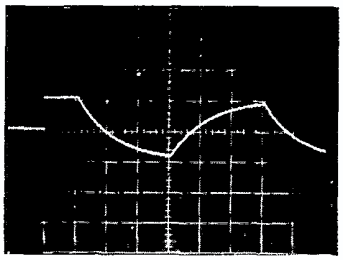
Note: The encircled numbers denote measuring point in the schematic disgram.

*2 FOCUS-IN: Press the key without loading a disc.

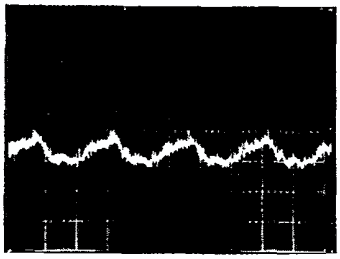
(2) TP1-Pin1: PLAY MODE (RF)
500mV/div 500nsec/div



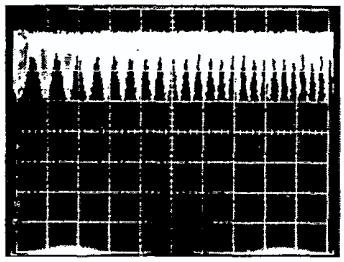
(5) IC8202-Pin3: FOCUS-IN (*2) MODE (FODR)
1V/div 200msec/div



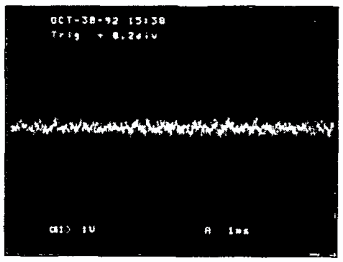
(7) IC8201-Pin3: PLAY MODE (SPDR)
1V/div 50msec/div



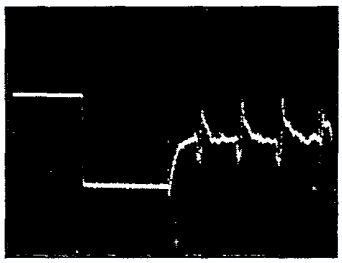
(2) TP1-Pin1: TRACK SEARCH MODE (RF)
500mV/div 200μsec/div



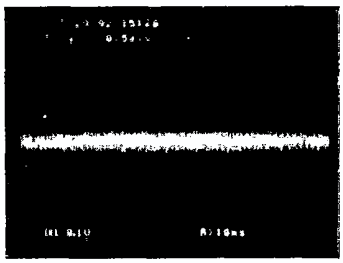
(5) IC8202-Pin3: PLAY MODE (FODR)
1V/div 1msec/div



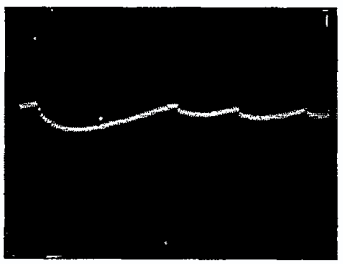
(7) IC8201-Pin3: TRACK SEARCH MODE (SPDR)
2V/div 50msec/div



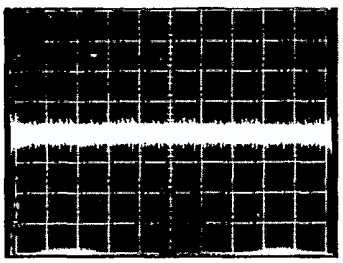
(3) TP1-Pin6: PLAY MODE (FOER)
100mV/div 10msec/div



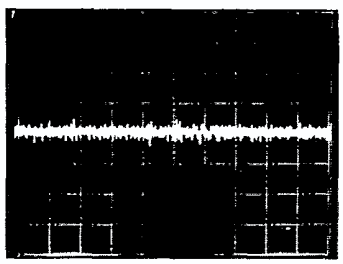
(8) IC8202-Pin9: PLAY MODE (CADR)
0.2V/div 2sec/div



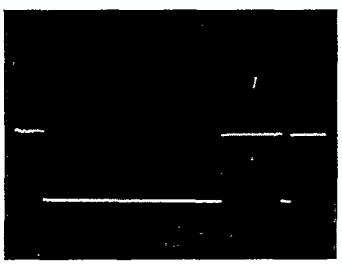
(4) TP1-Pin2: PLAY MODE (TRER)
1V/div 1msec/div



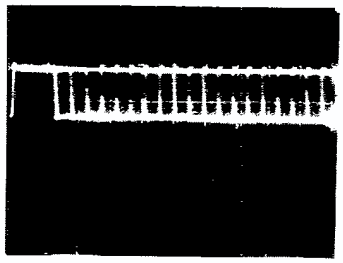
(6) IC8202-Pin4: PLAY MODE (TRDR)
500mV/div 1msec/div



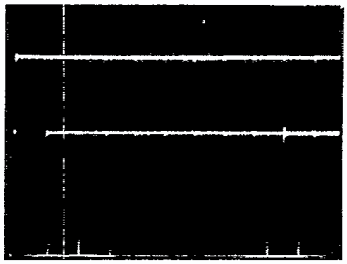
(8) IC8202-Pin9: TRACK SEARCH MODE (CADR)
2V/div 200msec/div



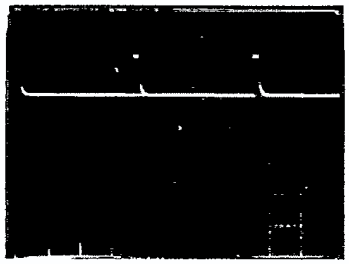
(9) IC8151-Pin32: PLAY MODE (EFM)
2V/div 500nsec/div



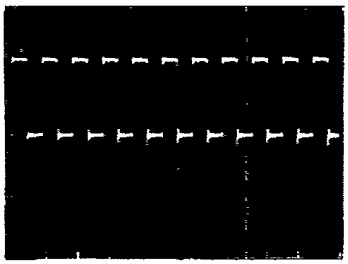
(19) IC8301-Pin44: PLAY MODE (1kHz) (PCMD)
2V/div 500nsec/div



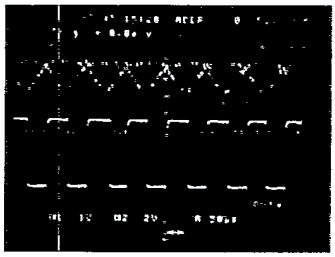
(33) IC8301-Pin25: PLAY MODE (MDP)
2V/div 2μsec/div



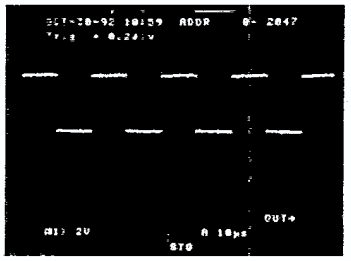
(16) IC8301-Pin46: PLAY MODE (1kHz) (BCK)
2V/div 500nsec/div



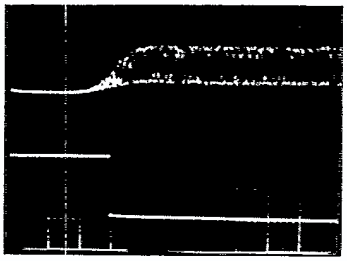
(23) : TRACK SEARCH MODE
Upper: TP1-Pin1 (RF) 1V/div
Lower: IC8151-Pin26 (C. OUT)
2V/div 50μsec/div



(18) IC8301-Pin42: PLAY MODE (1kHz) (LRCK)
2V/div 10μsec/div



(24) : PLAY MODE
Upper: TP1-Pin1 (RF) 1V/div
Lower: IC8151-Pin30 (DFCT)
5V/div 200μsec/div

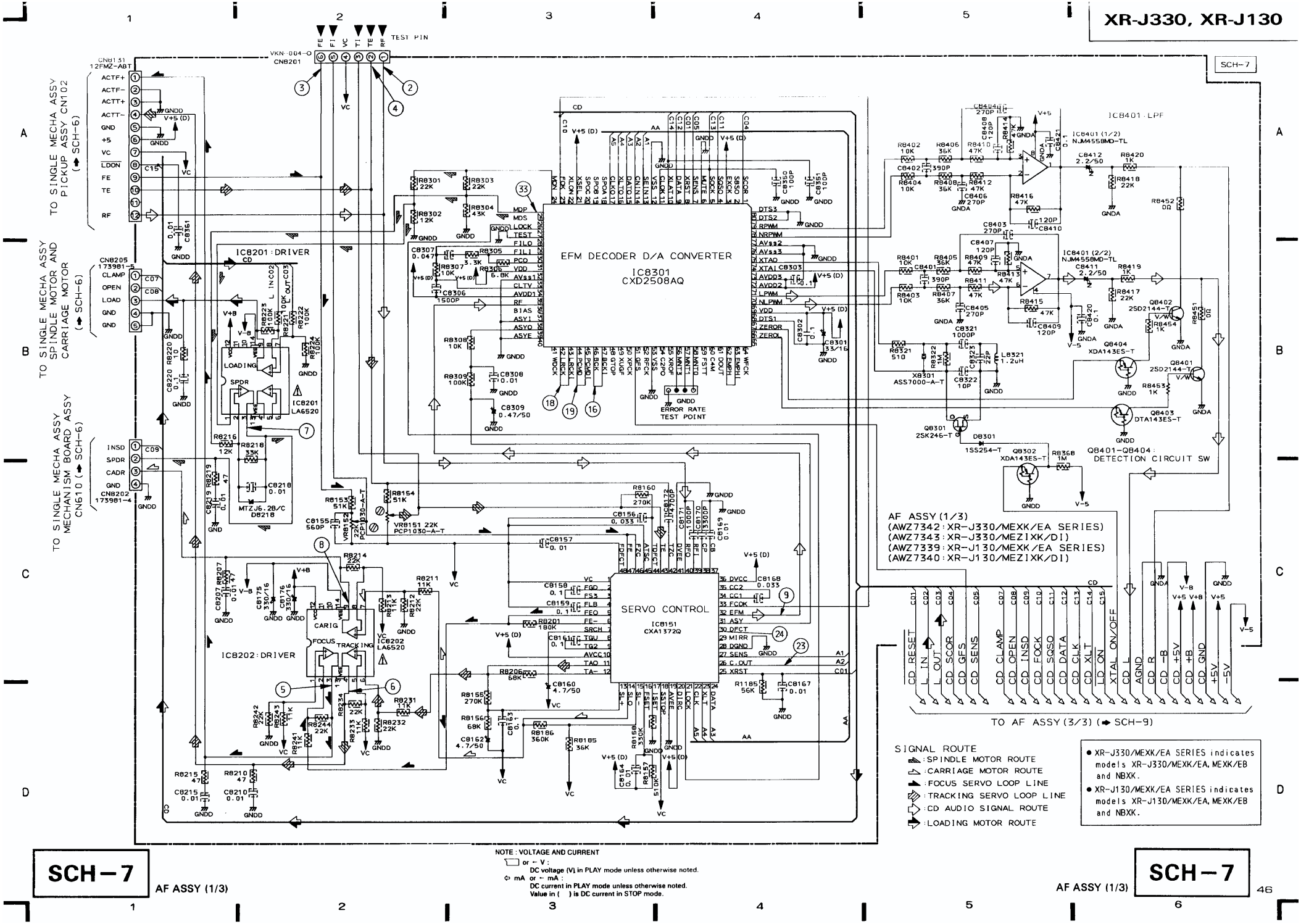


IC8151 (CXA1372Q)

Pin No.	Voltage [V]	Pin No	Voltage [V]	Pin No.	Voltage [V]	Pin No	Voltage [V]
1	2.5	13	2.5	25	5.0	37	2.0
2	2.5	14	2.5 to 2.6	26	0.1	38	2.7 to 2.8
3	2.5	15	2.5	27	4.9	39	2.5
4	2.5	16	0.8	28	0	40	3.2
5	2.4	17	1.3	29	0	41	0
6	2.5	18	2.5	30	0	42	2.5
7	2.6	19	0	31	0	43	2.5
8	2.5	20	5.0	32	2.7	44	2.5
9	2.5	21	5.0	33	5.0	45	2.5
10	5.0	22	4.9	34	1.3	46	2.5
11	2.5	23	5.0	35	1.0	47	2.5
12	2.5	24	4.9 to 5.0	36	5.0	48	2.4

IC8301 (CXD2508AQ)

Pin No.	Voltage [V]	Pin No.	Voltage [V]	Pin No.	Voltage [V]	Pin No.	Voltage [V]
1	0.1	21	5.0	41	2.4	61	2.0
2	0.1	22	0	42	2.4	62	0
3	5.0	23	5.0	43	2.4	63	0
4	0.1	24	5.0	44	2.4	64	2.5
5	4.9	25	2.6 to 2.7	45	2.4	65	0
6	0	26	0.1	46	1.8	66	0
7	2.2 to 2.5	27	5.0	47	1.8	67	0
8	5.0	28	0	48	0	68	5.0
9	4.9	29	2.7	49	4.9	69	2.5
10	5.0	30	2.6	50	1.2	70	2.5
11	4.9	31	2.6	51	4.9	71	5.0
12	0	32	5.0	52	2.5	72	5.0
13	4.9	33	0	53	0	73	2.4
14	0.1	34	2.7	54	0	74	2.4
15	4.9 to 5.0	35	5.0	55	4.9	75	0
16	5.0	36	2.7	56	4.5	76	0
17	4.9	37	0	57	0	77	2.5
18	0	38	0	58	0 to 0.3	78	2.5
19	0	39	2.5	59	2.8	79	0
20	0	40	0	60	1.4	80	0


SCH-7
TEST PIN
FE FI VC TI TE RF
VKN-004-O
CN8201
CN8151
12FMZ-ABT
ACTF+
ACTF-
ACTT+
ACTT-
GND
+5
VC
LDON
FE
TE
RF
TO SINGLE MECHA ASSY PICKUP ASSY CN102 (SCH-6)
CN8205
173981-5
CLAMP
OPEN
LOAD
GND
GND
TO SINGLE MECHA ASSY SPINDLE MOTOR AND CARRIAGE MOTOR (SCH-6)
CN8202
173981-4
INSD
SPDR
CADR
GND
TO SINGLE MECHA ASSY MECHANISM BOARD ASSY CN610 (SCH-6)
IC8201 : DRIVER
LOADING
SPDR
IC8201
LA6520
IC8202 : DRIVER
FOCUS
TRACKING
CARIG
IC8202
LA6520
EFM DECODER D/A CONVERTER
IC8301
CXD2508AQ
ERROR RATE
TEST POINT
SERVO CONTROL
IC8151
CXA1372Q
IC8401 : LPF
NJM4558MD-TL
XDA143ES-T
2SD2144-T
DTA143ES-T
2SK246-T
1SS254-T
Q8401-Q8404 :
DETECTION CIRCUIT SW
AF ASSY (1/3)
(AWZ7342 : XR-J330/MEXK/EA SERIES)
(AWZ7343 : XR-J330/MEZIXK/DI)
(AWZ7339 : XR-J130/MEXK/EA SERIES)
(AWZ7340 : XR-J130/MEZIXK/DI)
CD RESET
L IN
L OUT
CD SCOR
CD GFS
CD SENS
CD CLAMP
CD OPEN
CD INSD
CD FOCK
CD SQSO
CD DATA
CD CLK
CD XLT
LD ON
XTAL ON/OFF
CD L
AGND
CD R
CD -B
CD +5V
CD +B
CD GND
+5V
-5V
TO AF ASSY (3/3) (➡ SCH-9)
SIGNAL ROUTE
: SPINDLE MOTOR ROUTE
: CARRIAGE MOTOR ROUTE
: FOCUS SERVO LOOP LINE
: TRACKING SERVO LOOP LINE
: CD AUDIO SIGNAL ROUTE
: LOADING MOTOR ROUTE
• XR-J330/MEXK/EA SERIES indicates models XR-J330/MEXK/EA, MEXK/EB and NBXK.
• XR-J130/MEXK/EA SERIES indicates models XR-J130/MEXK/EA, MEXK/EB and NBXK.
NOTE : VOLTAGE AND CURRENT
or ← V : DC voltage (V) in PLAY mode unless otherwise noted.
or ← mA : DC current in PLAY mode unless otherwise noted.
Value in ( ) is DC current in STOP mode.

- XR-J330/MEXK/EA SERIES indicates models XR-J330/MEXK/EA, MEXK/EB and NBXK.
- XR-J130/MEXK/EA SERIES indicates models XR-J130/MEXK/EA, MEXK/EB and NBXK.

TO AF ASSY (3/3) (➡ SCH-9)

SIGNAL ROUTE
- ▶ : DECK AUDIO SIGNAL (PLAYBACK)
- ▶ : DECK AUDIO SIGNAL (REC)

AF ASSY (2/3)
(AWZ7342 : XR-J330/MEXK/EA SERIES)
(AWZ7343 : XR-J330/MEZ1XK/DI)
(AWZ7339 : XR-J130/MEXK/EA SERIES)
(AWZ7340 : XR-J130/MEZ1XK/DI)

MECHANISM UNIT I (1/2)
HEAD L
GND
HEAD R
RKP1583
350mm
CN4001
B3B-EH-R

MECHANISM UNIT II (1/2)
HEAD L
GND
HEAD R
ERASE
GND
RKP1582
350mm
CN4002
CN4003
B5B-EH
B2B-EH

PB I L
PB II L

IC4202
BU4066BC-TB

IC4101 (2/2)
NJM4558M-D-TR
IC4101 : PB AMP
IC4101 (1/2)

Q4307, Q4308 : PB/REC SW

IC4301 : REC AMP
IC4301 (2/2)
IC4301 (1/2)
NJM4558MD-TL

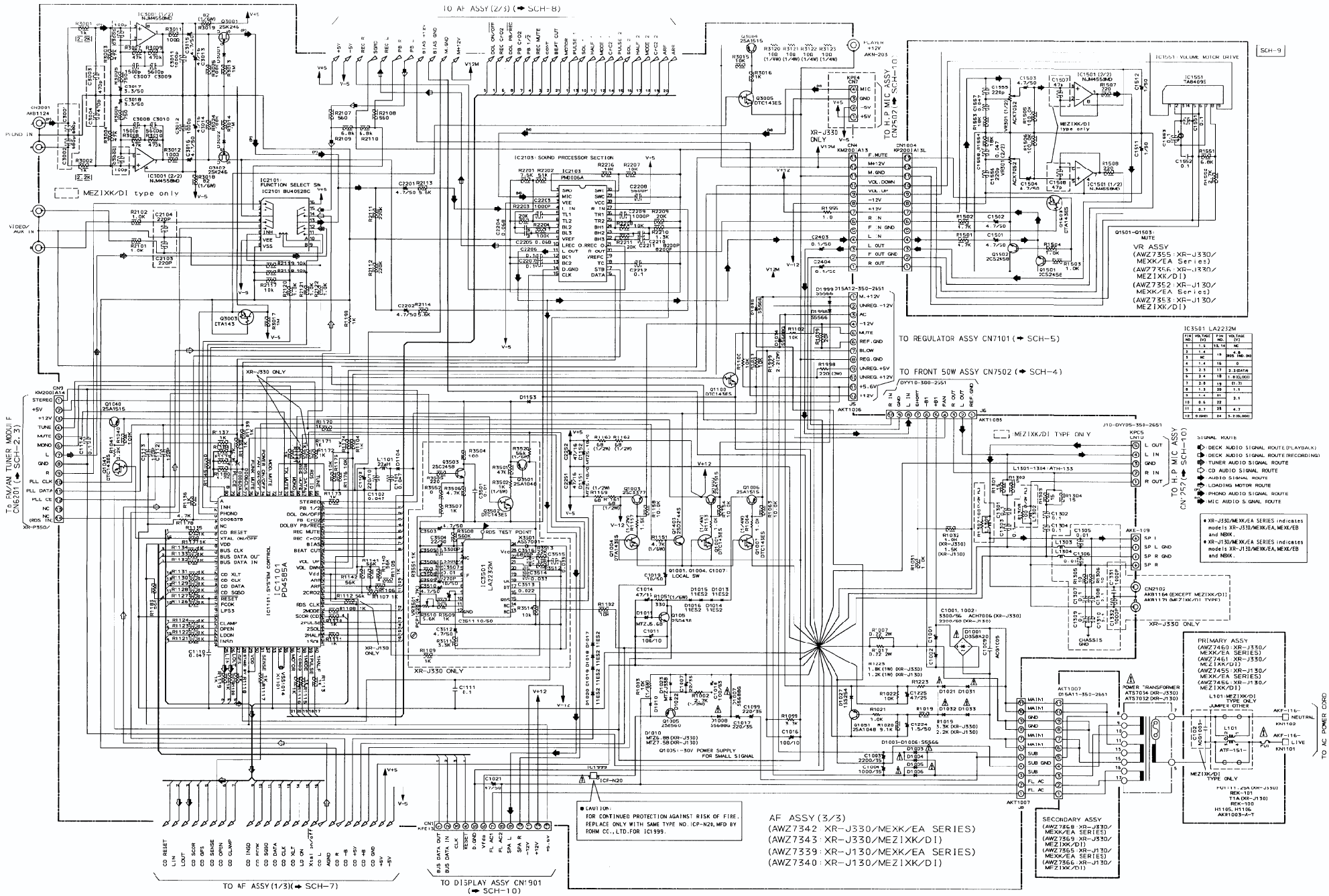
IC4421 : DOLBY NR
IC4421
CXA1101P

MECHANISM UNIT I (2/2)
MECHA CHASSIS
J4004
AKT1023
D15A09-350-2468

MECHANISM UNIT II (2/2)
J4005
AKT1019
D15A15-250-2468

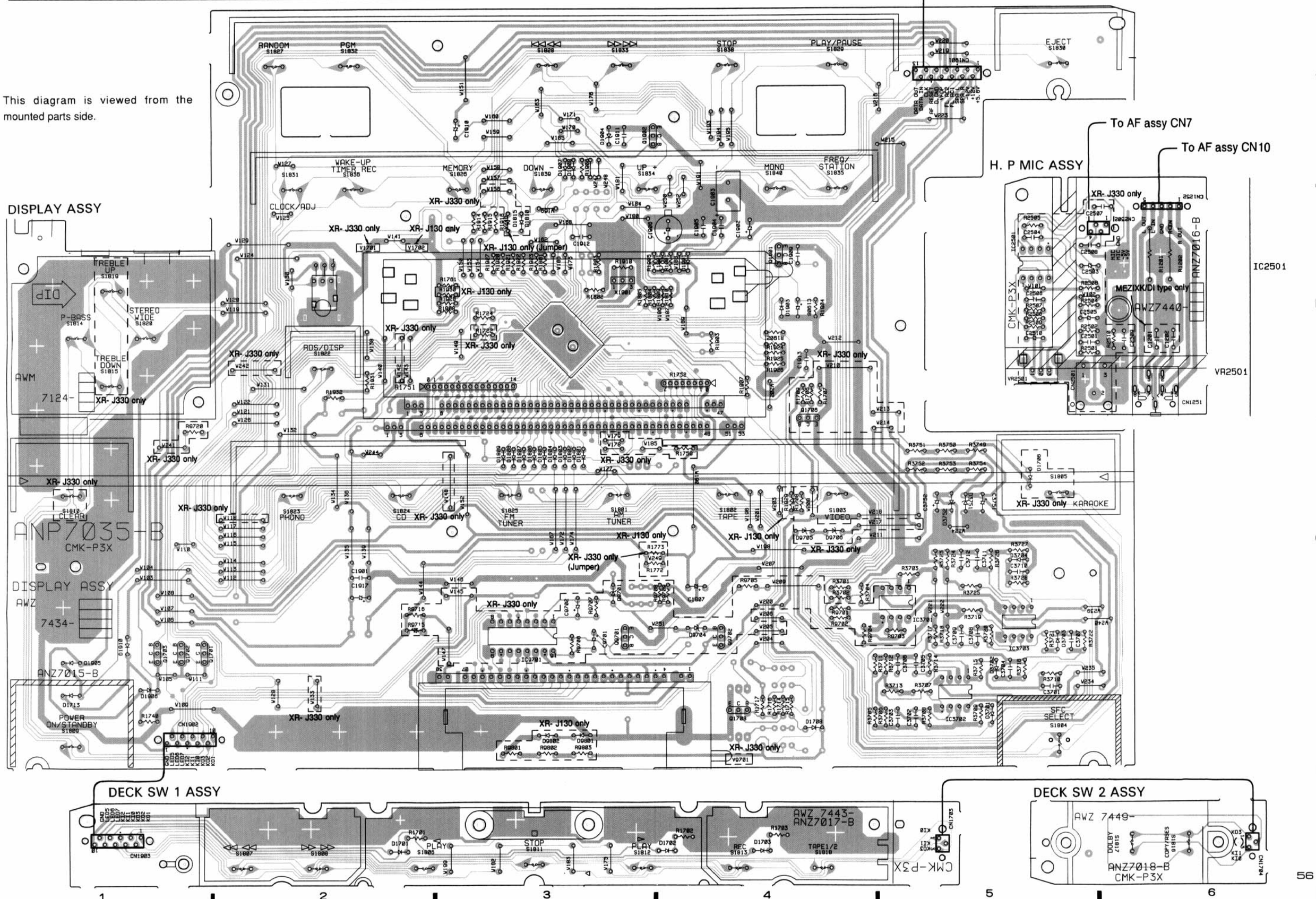
TAPE TEST POINT TP -4.2dBV
-9dBV
-31.2dBV
-11.2dBV

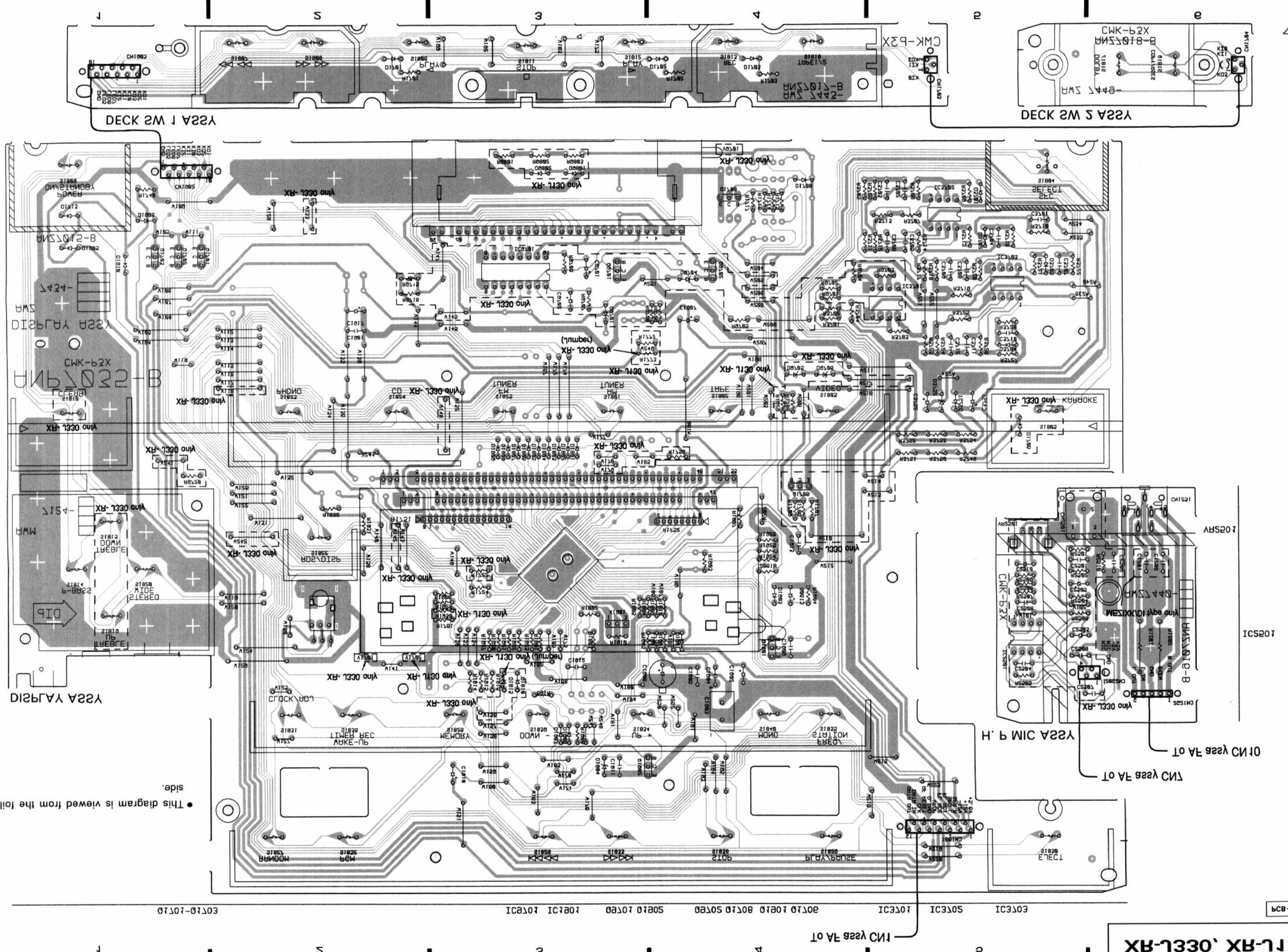
Q4351-Q4355 : BIAS OSC


TO AF ASSY (2/3) (➡ SCH-8)
TO AF ASSY (1/3) (➡ SCH-7)
TO DISPLAY ASSY CN1901 (➡ SCH-10)
TO REGULATOR ASSY CN7101 (➡ SCH-5)
TO FRONT 50W ASSY CN7502 (➡ SCH-4)
TO H.P MIC ASSY (CN:252) (➡ SCH-10)
TO A/V TUNER MODULE CN6201 (➡ SCH-2, 3)
TO AC POWER CORD
XR-J330 ONLY
MEZIXK/DI type only
MEZIXK/DI TYPE ONLY
VR ASSY (AWZ7355: XR-J330/MEXK/EA Series) (AWZ7356: XR-J330/MEZIXK/DI) (AWZ7352: XR-J130/MEXK/EA Series) (AWZ7353: XR-J130/MEZIXK/DI)
AF ASSY (3/3) (AWZ7342 XR-J330/MEXK/EA SERIES) (AWZ7343 XR-J330/MEZIXK/DI) (AWZ7339 XR-J130/MEXK/EA SERIES) (AWZ7340 XR-J130/MEZIXK/DI)
PRIMARY ASSY (AWZ7460 XR-J330/MEXK/EA SERIES) (AWZ7461 XR-J330/MEZIXK/DI) (AWZ7455 XR-J130/MEXK/EA SERIES) (AWZ7456 XR-J130/MEZIXK/DI)
SECONDARY ASSY (AWZ7368 XR-J330/MEXK/EA SERIES) (AWZ7369 XR-J330/MEZIXK/DI) (AWZ7365 XR-J130/MEXK/EA SERIES) (AWZ7366 XR-J130/MEZIXK/DI)
SIGNAL ROUTE
DECK AUDIO SIGNAL ROUTE (PLAYBACK)
DECK AUDIO SIGNAL ROUTE (RECORDING)
TUNER AUDIO SIGNAL ROUTE
CD AUDIO SIGNAL ROUTE
AUDIO SIGNAL ROUTE
LOADING MOTOR ROUTE
PHONO AUDIO SIGNAL ROUTE
MIC AUDIO SIGNAL ROUTE
* XR-J330/MEXK/EA SERIES indicates models XR-J330/MEXK/EA, MEXK/EB and MEXK.
* XR-J130/MEXK/EA SERIES indicates models XR-J130/MEXK/EA, MEXK/EB and MEXK.
IC3501 LA2232M
CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. ICP-N20, MFD BY ROHM CO., LTD. FOR IC1999.

Q1701-Q1703 IC9701 IC1901 Q9701 Q1902 Q9702 Q1708 Q1901 Q1706 IC3701 IC3702 IC3703

- This diagram is viewed from the mounted parts side.




DECK SW 1 ASSY
DECK SW 2 ASSY
DISPLAY ASSY
H. P MIC ASSY
TO AF ASSY CN1
TO AF ASSY CN10
• This diagram is viewed from the foil side.
XR-U330, XR-U130

4. PCB PARTS LIST

NOTES :

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

  Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

  560Ω → 56 × 10¹ → 561 ····· RD1/8PM 5 6 1 J

  47kΩ → 47 × 10³ → 473 ····· RD1/4PS 4 7 3 J

  0.5Ω → 0R5 ····· RN2H 0 R 5 K

  1Ω → 010 ····· RS1P 0 1 0 K

  Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

  5.62kΩ → 562 × 10¹ → 5621 ····· RM1/4PC 5 6 2 1 F

4.1 FOR XR−J330

■ LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol & Description	Part No.				Remarks
		XR−J330				
		MEXK/EA	MEXK/EB	NBXK	MEZIXK/DI	
NSP	MAIN assy	AWK7095	AWK7095	AWK7095	AWK7096	
	├— AF assy	AWZ7342	AWZ7342	AWZ7342	AWZ7343	
	├— VR assy	AWZ7355	AWZ7355	AWZ7355	AWZ7356	
	└— SECONDARY assy	AWZ7368	AWZ7368	AWZ7368	AWZ7369	*1
NSP	COMPLEX assy	AWM7124	AWM7124	AWM7124	AWM7125	
	├— DISPLAY assy	AWZ7434	AWZ7434	AWZ7434	AWZ7435	*2
NSP	├— H. P MIC assy	AWZ7440	AWZ7440	AWZ7440	AWZ7441	
NSP	├— DECK SW 1 assy	AWZ7443	AWZ7443	AWZ7443	AWZ7443	
NSP	├— DECK SW 2 assy	AWZ7449	AWZ7449	AWZ7449	AWZ7449	
	└— PRIMARY assy	AWZ7460	AWZ7460	AWZ7460	AWZ7461	
	TUNER MODULE	AXQ7015	AXQ7015	AXQ7015	AXQ7014 *3	
	POWER MODULE F50	AXQ7218	AXQ7218	AXQ7218	AXQ7218	
	├— FRONT 50W ASSY	AWZ7561	AWZ7561	AWZ7561	AWZ7561	
	└— REGULATOR assy	AWZ7562	AWZ7562	AWZ7562	AWZ7562	
NSP	SINGLE MECHA assy	RXA1672	RXA1672	RXA1672	RXA1672	
NSP	└— MECHANISM BOARD assy	PWX1192	PWX1192	PWX1192	PWX1192	

Notes:

**1: Although AWZ7368 and AWZ7369 are different in part number, they consist of the same components.*

**2: Although AWZ7434 and AWZ7435 are different in part number, they consist of the same components.*

**3: Refer to "● PCB PARTS LIST" of page 65.*

■ CONTRAST OF PCB ASSEMBLIES (For XR−J330)

AF ASSY

AWZ7342 and AWZ7343 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7342	AWZ7343	
	L1301−L1304	Not used	ATH−133	
	C1305, C1306	Not used	CQMXA103J100	
	C1307−C1310	Not used	CKSQYF104Z50	
	C1332	Not used	CCSQSL102J50	
	C1331	Not used	CKCYF102Z50	
	C2103, C2104	Not used	CCSQSL221J50	
	C3001, C3002	Not used	CCSQSL681J50	
	C3003, C3004	Not used	CCSQCH471J50	
	C3005, C3006	Not used	CCSQSL101J50	
	R1305, R1306	Not used	RS1/10S100J	
	R1307, R1308	Not used	RD1/2PMFL101J	
	R3001, R3002	RS1/10S102J	RS1/10S222J	
	CN2102	AKB1164	AKB1171	

VR ASSY

AWZ7355 and AWZ7356 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7355	AWZ7356	
	C1507, C1508	Not used	CCSQSL470J50	

H. P MIC ASSY

AWZ7440 and AWZ7441 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7440	AWZ7441	
	C1201, C1202	Not used	CCCSL101J50	

PRIMARY ASSY

AWZ7460 and AWZ7461 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7460	AWZ7461	
	L101	Not used	ATF−151	
	C102 (0.01μF/400V)	Not used	ACG1003	

■ PARTS LIST FOR XR−J330/MEXK/EA

Mark	No.	Description	Parts No.
	AF ASSY		
	SEMICONDUCTORS		
	IC2101		BU4052BCF
	IC4202		BU4066BCF
	IC4421		CXA1101P
	IC8151		CXA1372Q
	IC8301		CXD2508AQ
⚠	IC1999		ICP−N20
	IC3501		LA2232M
⚠	IC8201, IC8202		LA6520
	IC3001, IC4101, IC4301, IC8401		NJM4558MD
	IC1101		PD4585A
	IC2103		PM0006A
	Q1051, Q3501		2SA1048
	Q1002, Q1006, Q1040, Q3004, Q4113		2SA1515
	Q4352		2SA1515
	Q1005		2SB560
	Q4356		2SC2240
	Q3503, Q4101, Q4102, Q4203−Q4206		2SC2458
	Q4301, Q4302, Q4305, Q4306		2SC2458
	Q4451−Q4454		2SC2458
	Q1003, Q4111, Q4161, Q4353, Q4354		2SC3377
	Q1403, Q4355, Q8401, Q8402		2SD2144S
	Q105		2SD438
	Q3001, Q3002, Q8301		2SK246
	Q4307, Q4308		2SK373
	Q1004, Q3003, Q4456, Q8302		DTA143ES
	Q8403, Q8404		DTA143ES
	Q1001, Q1007, Q1041, Q1100, Q3005		DTC143ES
	Q3502, Q4112, Q4207, Q4351, Q4455		DTC143ES
	D1013−D1020		11ES2
	D1021, D1022, D1027, D1031−D1033		1SS254
	D1104, D1153, D3001, D3002		1SS254
	D4111−D4113, D4161, D4162		1SS254
	D4201, D4202, D4301−D4306		1SS254
	D4551, D4552, D8301		1SS254
⚠	D1001		D3SBA20 (B)
	D1023		MTZJ33B
	D1151, D1152		MTZJ5.1B/C
	D1011		MTZJ5.6B
	D8218		MTZJ6.2B/C
	D1010		MTZJ6.8B
⚠	D1003−D1006, D1035, D1998, D1999		S5566
⚠	D1007, D1008, D1034		S5688G
	COILS AND FILTERS		
	L8321		LAU1R2J
	L1101		LAU220J
	L4301, L4302		LTA472J
	L4303, L4304		LTA822J
	F4401, F4402		RTF1209
	TRANSFORMERS		
	T4351		ATX−043
	CAPACITORS		
	C4361 (2000P/630)		ACE1020
	C1009 (0.01/150)		ACG1005
	C1001, C1002 (3300/56)		ACH7006
	C4319, C4320		CCCSL271K500
	C4323, C4324, C8322		CCSQCH100D50
	C3011, C3012		CCSQCH102J50
	C8407−C8410		CCSQCH121J50
	C8323		CCSQCH220J50
	C4353		CCSQCH221J50
	C3508, C8403−C8406		CCSQCH271J50
	C4998, C4999, C8401, C8402		CCSQCH391J50
	C4191, C4192		CCSQCH470J50
	C4101, C4102		CCSQCH471J50
	C4151, C4152, C4355		CCSQCH681J50
	C1112, C1113, C8350, C8351		CCSQSL101J50
	C8411, C8412		CEANP2R2M50
	C4303, C4304, C4451, C4452		CEAS010M50
	C2403, C2404		CEAS0R1M50
	C1019, C3509, C3511, C4359, C4360		CEAS100M50
	C4364, C4403−C4405, C4407, C4454		CEAS100M50
	C1011, C1016, C4401, C4408		CEAS101M10
	C1018		CEAS101M63
	C1004		CEAS102M35
	C1224		CEAS1R5M50
	C1007, C3504, C4453		CEAS220M50
	C1103		CEAS221M10
	C1017, C1099		CEAS221M35
	C1003		CEAS222M35
	C4103, C4104, C4309, C4310		CEAS330M16
	C4317, C4318, C8301		CEAS330M16
	C8175, C8176		CEAS331M16
	C3017, C3018, C4357		CEAS3R3M50
	C1014, C2251, C2252, C3013, C3014		CEAS470M16
	C4107, C4108, C4351		CEAS470M16
	C1225		CEAS470M25
	C1021		CEAS470M50
	C2201, C2202, C3015, C3016, C3503		CEAS4R7M50
	C3510, C3512, C4207, C4208		CEAS4R7M50
	C4301, C4302, C4315, C4316, C8160		CEAS4R7M50
	C8162		CEAS4R7M50
	C8309		CEASR47M50
	C4402, C4406		CEASR68M50
	C8302		CGCYX104K25
	C4363		CKCYB222K500
	C2203, C2209, C8171, C8321		CKSQYB102K50
	C4352, C4354, C8157, C8164, C8167		CKSQYB103K50
	C8169, C8218, C8308, C8361		CKSQYB103K50
	C3007, C3008, C4411, C4412, C8306		CKSQYB152K50
	C4313, C4314		CKSQYB182K50
	C4307, C4308		CKSQYB273K50
	C3505, C3506, C8170		CKSQYB332K50
	C4305, C4306, C8156, C8168		CKSQYB333K50
	C8172		CKSQYB472K50
	C8307		CKSQYB473K50
	C8155		CKSQYB561K50
	C2208, C3009, C3010		CKSQYB562K50
	C3516		CKSQYB682K50
	C2210, C2211		CKSQYB822K50
	C3501, C3507, C8207, C8210, C8215		CKSQYF103Z50
	C8219		CKSQYF103Z50
	C1301−C1304, C2206, C2207, C2212		CKSQYF104Z50
	C8158, C8159, C8161, C8163, C8220		CKSQYF104Z50
	C8303, C8420, C8421		CKSQYF104Z50
	C3513		CKSQYF223Z50
	C3514, C3515		CKSQYF333Z50

Mark	No.	Description	Parts No.
	C1101, C1102, C1110, C1111, C1114		CKSQYF473Z50
	C4409, C4410		CQMA103J50
	C4358		CQMA123K250
	C4356		CQMA153J50
	C4362		CQMA562K400
	C4105, C4106		CQMA682J50
	C2204, C2205		CQMA683J50
	C4311, C4312		CQMA823J50
RESISTORS			
	VR4111 (2.2K)		PCP1025
	VR3501, VR4301, VR4302 (4.7K)		PCP1028
	VR4201–VR4204 (10K)		PCP1029
	VR8151, VR8152 (22K)		PCP1030
	VR4351, VR4352 (220K)		PCP1033
	R4352		RD1/2PM102J
	R1157		RD1/2PM152J
	R1002		RD1/2PM272J
	R4353		RD1/2PM470J
	R1159–R1162		RD1/2PM680J
	R4357		RD1/2PM6R8J
	R3020–R3023		RD1/4PM100J
	R1064, R1153		RD1/4PM102J
	R4117		RD1/4PM122J
	R1995		RD1/6PM010J
	R1021, R1199, R3016, R3502, R8454		RD1/6PM102J
	R1003, R1022, R1102, R4112, R4416		RD1/6PM103J
	R4211, R4212		RD1/6PM153J
	R1041		RD1/6PM222J
	R1051		RD1/6PM331J
	R1151, R1178		RD1/6PM472J
	R3520		RD1/6PM563J
	R3018, R3019, R4113, R4114		RD1/6PM820J
	R4323, R4324		RD1/6PM820J
	R1223		RS1LMF182J
	R1998		RS2LMF220J
	R1999		RS2LMF2R2J
	R1007, R1017		RS2LMFR22J
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN8131	FPC CONNECTOR 12P	12FMZ–ABT
	CN8202	MT CONNECTOR 4P	173981–4
	CN8205	MT CONNECTOR 5P	173981–5
		4P PIN JACK (VIDEO/AUX, PHONO)	AKB1124
		2P PIN JACK (REAR SPEAKER)	AKB1164
		4P SPEAKER TERMINAL	AKE–109
		DC JACK	AKN–203
		CABLE HOLDER	AKT1007
		CABLE HOLDER	AKT1023
	X8301	(33.8688MHZ)	ASS7000
	X3501	(456KHZ)	ASS7001
	CN4003	2P TOP POST	B2B–EH
	CN4002	3P TOP POST	B3B–EH
	CN4001	3P TOP POST	B3B–EH–R
	CN4	13P PLUG	KM200IA13
	CN10	5P JUMPER CONNECTOR	KPC5
	CN1	13P JUMPER CONNECTOR	KPE13
	CN7	4P JUMPER CONNECTOR	KPE4
	CN8201	6P SIDE POST	VKN–004
	X1101	(4.19MHZ)	VSS1014
	CN9	14P CONNECTOR	KM200IA14

Mark	No.	Description	Parts No.
VR ASSY			
SEMICONDUCTORS			
	IC1501		NJM4558MD
	IC1551		TA8409S
	Q1501, Q1502		2SC2458
	Q1503		DTA143ES
CAPACITORS			
	C1555, C1556		CCSQSL221J50
	C1511, C1512		CEAS010M50
	C1599		CEAS470M50
	C1501–C1504		CEAS4R7M50
	C1557, C1558		CKSQYB473K50
	C1551–C1553		CKSQYF104Z50
RESISTORS			
	VR301	(100K–B×2)	RCX1052
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN1004	13P SOCKET	KP200IA13L
SECONDARY ASSY			
OTHERS			
		CABLE HOLDER	AKT1007
DISPLAY ASSY			
SEMICONDUCTORS			
	IC9701		BA6146
	IC3701–IC3703		NJM4558DX
	IC1901		PDC021A
	Q1706, Q1708		2SA1048
	Q1901		2SC2458
	Q1701–Q1703, Q9702		DTA143ES
	Q1902, Q9701		DTC143ES
	D1801–D1810, D1815, D1901, D1903		1SS254
	D1905–D1908, D1910, D3701–D3704		1SS254
	D1713		BR3372XJ65A
	D9704–D9706		MTZJ11B
	D9701		MTZJ27B
	D3751, D3752		MTZJ5.1B/C
	D1904		MTZJ6.8B
	D1706, D1708		SLR–342MGTF7
COILS AND FILTERS			
	L1901		LAU220J
SWITCHES AND RELAYS			
	S1801–S1805, S1809, S1810		ASG1051
	S1814, S1815, S1819, S1820		ASG1051
	S1822–S1836, S1838–S1840		ASG1051
CAPACITORS			
	C1903		ACH1246
	C1908		CEAS010M50
	C1910, C9702		CEAS100M50
	C3751, C3752		CEAS220M10
	C9701		CEAS2R2M50
	C1906		CEAS331M10
	C1902		CEAS470M16
	C1917		CEAS470M50
	C1907		CEASR47M50
	C1913		CGCYF104Z25

Mark	No.	Description	Parts No.
	C3705, C3706		CGCYX123K25
	C3701, C3704, C3707, C3710		CGCYX473K25
	C3702, C3703		CGCYX823K25
	C1909		CKCYB102K50
	C3708, C3709		CKCYB182K50
	C3711, C3712		CKCYB331K50
	C1901, C1904, C1905, C1912		CKCYF473Z50
	C1911		CKPUYF223Z25
	RESISTORS		
	R1751		RA14T104J
	R1752		RA7T104J
	Other Resistors		RD1/6PM□□□J
	OTHERS		
	V9701	FL TUBE	AAV1158
	V1701	FL TUBE	AAV7010
		CABLE HOLDER	AKT1011
		REMOTE RECEIVER UNIT	GP1U28X
	X1901	(6.00MHZ)	VSS1045
	H. P MIC ASSY		
	SEMICONDUCTORS		
	IC2501		NJM4558DX
	CAPACITORS		
	C2504		CCCCH221J50
	C2503, C2505, C2510		CEAS100M50
	C2501		CKCYB122K50
	C2506		CKCYB682K50
	C2507−C2509		CKCYF473Z50
	RESISTORS		
	VR2501	(10K−B)	ACS1028
	R1201, R1202		RS2LMF331J
	Other Resistors		RD1/6PM□□□J
	OTHERS		
	CN2501	MINI JACK	AKN−207
	CN1251	MINI JACK	AKN1028
	DECK SW 1 ASSY		
	SEMICONDUCTORS		
	D1703		BR3372XJ65A
	D1701, D1702		SLR−342MGTF7
	SWITCHES AND RELAYS		
	S1806−S1808, S1811−S1813, S1818		ASG1051
	RESISTORS		
	All Resistors		RD1/6PM□□□J
	DECK SW 2 ASSY		
	SWITCHES AND RELAYS		
	S1816, S1817		ASG1051
	PRIMARY ASSY		
	OTHERS		
⚠	H1105, H1106		AKR1003

Mark	No.	Description	Parts No.
	TUNER MODULE		
	SEMICONDUCTORS		
	IC6201		LA1836M
	IC6202		LM7001J
	Q6102		2SC2223
	Q6203		2SC2235
	Q6202		2SC2712
	Q6103, Q6214		2SC2714
	Q6201		2SK208
	Q6104		2SK302
	Q6101		3SK194
	Q6204		XDA124EK
	Q6217		XDC124EK
	D6101, D6102		1T33
	COILS AND FILTERS		
	L6104		ATC1003
	L6101		ATC1020
	L6102		ATC1021
	L6207	(10.7MHZ)	ATE1013
	F6203, F6204		ATF−119
	F6101		ATF−155
	F6202	(450KHZ)	ATF1155
	L6103	(2.2μH)	ATH1043
	L6202, L6203, L6208		LCTA2R2J3225
	TRANSFORMERS		
	T6101		ATE−063
	CAPACITORS		
	C6202, C6234, C6236	(1μF/16V)	ACG1051
	C6107		CCSCH010C50
	C6229		CCSCH821J50
	C6110		CCSQCH020C50
	C6101		CCSQCH050C50
	C6108, C6203, C6268		CCSQCH101J50
	C6111, C6116, C6208, C6221, C6222		CCSQCH150J50
	C6115		CCSQCH330J50
	C6114		CCSQRH080D50
	C6113		CCSQRH180J50
	C6105		CCSQTH150J50
	C6261		CEAS010M50
	C6224, C6246, C6262		CEAS100M50
	C6216, C6217		CEAS330M16
	C6231, C6233		CEAS3R3M50
	C6219		CEAS470M10
	C6243−C6245		CEAS470M16
	C6227		CEAS470M25
	C6238		CEJA100M16
	C6249, C6250		CEJA4R7M35
	C6215		CFTXA103J50
	C6214		CFTXA224J50
	C6103, C6106, C6112, C6204		CKSQYB102K50
	C6102, C6109, C6117, C6210, C6264		CKSQYB103K50
	C6213		CKSQYB223K50
	C6230		CKSQYB333K50
	C6228, C6252		CKSQYB472K50
	C6209, C6237, C6265, C6267		CKSQYB473K50
	C6212, C6218		CKSQYF103Z50
	C6220, C6226, C6239, C6242, C6255		CKSQYF223Z50

Mark	No.	Description	Parts No.
	C6235		CKSQYF224Z25
	C6225, C6241, C6266		CKSQYF473Z50
	C6232		CKSYB333K50
	C6251		CKSYB472K50
	C6223		CKSYF103Z50
	C6263		CKSYF473Z50
	RESISTORS		
	VR6201	(10K)	ACP1056
	VR6202		VRTB6VS223
	R6299, R6300		RD1/6PM102J
	R6113, R6116, R6118, R6268–R6271		RS1/8S000J
	R6275, R6276, R6278, R6283, R6284		RS1/8S000J
	R6290, R6293, R6294, R6297		RS1/8S000J
	R6243, R6244		RS1/8S101J
	R6211		RS1/8S103J
	R6237		RS1/8S182J
	R6209		RS1 8S221J
	R6239		RS1/8S332J
	R6101		RS1/8S470J
	Other Resistors		RS1/10S□□□J
	OTHERS		
	BN6201	4P ANTENNA TERMINAL	AKA1016
	X6203	(7.200MHZ)	ASS1042
	X6201	(456KHZ)	ASS1066
	X6202	(450KHZ)	ATF1027

FRONT 50W ASSY

SEMICONDUCTORS

	IC7501		UPC4570G2
	Q7507, Q7508		2SA1182
	Q7601		2SA1255
	Q7517, Q7518		2SB1115
	Q7501, Q7502		2SC2240
	Q7505, Q7506		2SC2859
	Q7602, Q7603		2SC3138
	Q7515, Q7516		2SD1615
	D7505, D7506, D7517 D7518		1SS181
	D7503, D7504, D7516		1SS184
	D7535–D7538		1SS226
	D7521–D7524		1SS244
	D7519, D7520, D7525, D7526, D7531		HSS104–02
	D7533		HSS104–02
	D7507–D7510		RD3.3ESB2

CAPACITORS

	C7519–C7522, C7545–C7552		CCSQCH101J50
	C7525–C7528		CCSQCH271J50
	C7503, C7504		CCSQCH331J50
	C7541, C7542		CCSQCH470J50
	C7523, C7524		CEALR10M50
	C7509, C7510		CEAS101M10
	C7602		CEJA221M6R3
	C7540		CEJA3R3M50
	C7539		CEJA4R7M50
	C7699		CKSQYB104K25
	C7529–C7532		CKSQYB333K50
	C7543, C7544		CKSQYB472K50
	C7601, C7603		CKSQYF104Z50
	C7537		CKSQYF473Z50

Mark	No.	Description	Parts No.
	RESISTORS		
	R7519, R7520	(634)	ACN1106
	R7515, R7516	(1.8k)	ACN1107
⚠	R7541, R7542		RD1 4PMF100J
⚠	R7547–R7550		RS1/10S2200F
	R7753		RS1/8S000J
⚠	R7537–R7540		RS1/8S100J
	R7553		RS1/8S101J
⚠	R7543, R7544		RS1/8S7R5J
	Other Resistors		RS1/10S□□□J

REGULATOR ASSY

SEMICONDUCTORS

	IC7201		PAC006B
	Q7301, Q7302		2SC1815
	Q7202		2SC2712
	D7204		1SS184
	D7205, D7208		HSS104–02
	D7210		RB441Q–40
	D7206, D7211		RD4.7ESB
	D7207		RD5.6ESB2

CAPACITORS

	C7402, C7406, C7408	(0.082μF/25V)	ACG1050
	C7204	(1μF/16V)	ACG1051
	C7401, C7405, C7407	(0.33μF/50V)	ACG1053
	C7409	(10μF/35V)	ACH1150
	C7202	(4.7μF/35V)	ACH7008
	C7203	(0.33μF/50V)	ACH7009
	C7140		CEAS010M50
	C7205		CEJA101M10
	C7697		CKCYB103K50
	C7201, C7208, C7219		CKSQYB103K50
	C7301		CKSQYB332K50
	C7206, C7215, C7216, C7404, C7698		CKSQYF104Z50

RESISTORS

	VR7201	(22K)	RCP1103
⚠	R7403–R7405		ACN1104
	R7252		RD1/6PM102J
	R7253		RD1/6PM103J
	R7303		RS1/10S1002F
	R7304		RS1/10S8200F
	Other Resistors		RS1/10S□□□J

OTHERS

	CN7101	CONNECTOR (12P)	KPE12

MECHANISM BOARD ASSY

SWITCHES AND RELAYS

	S610		DSG1016

OTHERS

	CN610	MT CONNECTOR 4P	173979–4

● PCB PARTS LIST (For XR−J330/MEZIXK/DI)

Mark	No.	Description	Parts No.
TUNER MODULE (AXQ7014)			
SEMICONDUCTORS			
	IC6201		LA1836M
	IC6202		LM7001J
	Q6102		2SC2223
	Q6203		2SC2235
	Q6202, Q6218		2SC2712
	Q6103, Q6214		2SC2714
	Q6201		2SK208
	Q6104, Q6105		2SK302
	Q6101		3SK194
	Q6204		XDA124EK
	Q6217		XDC124EK
	D6101−D6104		1SV228
COILS AND FILTERS			
	L6106		ATC1003
	L6105		ATC1015
	L6101		ATC1016
	L6102		ATC1017
	L6103		ATC1018
	L6104		ATC1019
	L6207	(10.7MHZ)	ATE1013
	F6204		ATF−107
	F6203		ATF−119
	F6205		ATF1152
	F6202	(450KHZ)	ATF1155
	L6107	(2.2μH)	ATH1043
	L6202, L6203, L6208		LCTA2R2J3225
	L6205		LCTA680J3225
	T6101		ATE−063
CAPACITORS			
	C6204, C6234, C6236, C6269	(1μF/16V)	ACG1051
	C6120		CCSCH060D50
	C6229		CCSCH102J50
	C6111, C6122		CCSQCH010C50
	C6112		CCSQCH020C50
	C6118		CCSQCH080D50
	C6113		CCSQCH101J50
	C6116, C6208, C6221, C6222		CCSQCH150J50
	C6117		CCSQCH330J50
	C6272		CCSQSL330J50
	C6105		CCSQSL471J50
	C6101		CCSQTH110J50
	C6119		CCSQTH150J50
	C6109		CCSQTH270J50
	C6107, C6110		CCSQTH300J50
	C6106		CCSQTH330J50
	C6261		CEAS010M50
	C6224, C6231, C6233, C6246, C6262		CEAS100M50
	C6216, C6217		CEAS330M16
	C6219		CEAS470M10
	C6243−C6245		CEAS470M16
	C6227		CEAS470M25
	C6238, C6248		CEJA100M16
	C6249, C6250		CEJA4R7M35
	C6215		CFTXA103J50
	C6214		CFTXA224J50
	C6115, C6125, C6126, C6207		CKSQYB102K50
	C6102, C6114, C6121, C6124, C6210		CKSQYB103K50
	C6264		CKSQYB103K50
	C6247		CKSQYB122K50
	C6213		CKSQYB223K50
	C6230		CKSQYB273K50
	C6228		CKSQYB472K50
	C6209, C6237, C6267		CKSQYB473K50
	C6251, C6252		CKSQYB562K50
	C6212, C6218		CKSQYF103Z50
	C6220, C6226, C6239, C6242		CKSQYF223Z50
	C6255, C6256		CKSQYF223Z50
	C6235		CKSQYF224Z25
	C6225, C6241		CKSQYF473Z50
	C6123		CKSYB103K50
	C6232		CKSYB273K50
	C6223		CKSYF103Z50
	C6263		CKSYF473Z50
RESISTORS			
	VR6201	(10K)	ACP1056
	VR6202		VRTB6VS223
	R6299, R6300		RD1/6PM102J
	R6115, R6119, R6123, R6127, R6129		RS1/8S000J
	R6268−R6271, R6275, R6276, R6278		RS1/8S000J
	R6283, R6284, R6293, R6294, R6297		RS1/8S000J
	R6302, R6303		RS1/8S000J
	R6243, R6244		RS1/8S101J
	R6211, R6239		RS1/8S103J
	R6237		RS1/8S122J
	R6209		RS1/8S221J
	R6112		RS1/8S473J
	Other Resistors		RS1/10S□□□J
OTHERS			
	BN6201	2P ANTENNA TERMINAL WITH PAL	AKA1017
	X6203	(7.200MHZ)	ASS1042
	X6201	(456KHZ)	ASS1066
	X6202	(450KHZ)	ATF1027
	CN6201	14P SOCKET	KP200IA14L
		AM RF TUNING BLOCK	AXX1041

4.2 FOR XR−J130

■ LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol & Description	Part No.				Remarks
		XR−J130				
		MEXK/EA	MEXK/EB	NBXK	MEZIXK/DI	
NSP	MAIN assy	AWK7092	AWK7092	AWK7092	AWK7093	
	├ AF assy	AWZ7339	AWZ7339	AWZ7339	AWZ7340	
	├ VR assy	AWZ7352	AWZ7352	AWZ7352	AWZ7353	
	├ SECONDARY assy	AWZ7365	AWZ7365	AWZ7365	AWZ7366	*1
	└ PRIMARY assy	AWZ7455	AWZ7455	AWZ7455	AWZ7456	
NSP	COMPLEX assy	AWM7121	AWM7121	AWM7121	AWM7122	
	├ DISPLAY assy	AWZ7431	AWZ7431	AWZ7431	AWZ7432	*2
NSP	├ H. P MIC assy	AWZ7437	AWZ7437	AWZ7437	AWZ7438	
NSP	├ DECK SW 1 assy	AWZ7443	AWZ7443	AWZ7443	AWZ7443	
NSP	└ DECK SW 2 assy	AWZ7449	AWZ7449	AWZ7449	AWZ7449	
	TUNER MODULE	AXQ3212	AXQ3212	AXQ3212	AXQ3214	
	POWER MODULE F50	AXQ7218	AXQ7218	AXQ7218	AXQ7218	
	├ FRONT 50W ASSY	AWZ7561	AWZ7561	AWZ7561	AWZ7561	
	└ REGULATOR assy	AWZ7562	AWZ7562	AWZ7562	AWZ7562	
NSP	SINGLE MECHA assy	RXA1672	RXA1672	RXA1672	RXA1672	
NSP	└ MECHANISM BOARD assy	PWX1192	PWX1192	PWX1192	PWX1192	

Notes:
**1: Although AWZ7365 and AWZ7366 are different in part number, they consist of the same components.*
**2: Although AWZ7431 and AWZ7432 are different in part number, they consist of the same components.*

■ CONTRAST OF PCB ASSEMBLIES (For XR−J130)

VR ASSY

AWZ7352 and AWZ7353 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7352	AWZ7353	
	C1507, C1508	Not used	CCSQSL470J50	

PRIMARY ASSY

AWZ7455 and AWZ7456 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7455	AWZ7456	
	L101	Not used	ATF−151	
	C102 (0.01μF/400V)	Not used	ACG1003	

AF ASSY

AWZ7339 and AWZ7340 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7339	AWZ7340	
	L1301−L1304	Not used	ATH−133	
	C1305, C1306	Not used	CQMXA103J100	
	C1307−C1310	Not used	CKSQYF104Z50	
	C2103, C2104	Not used	CCSQSL221J50	
	C3001, C3002	Not used	CCSQSL681J50	
	C3003, C3004	Not used	CCSQCH471J50	
	C3005, C3006	Not used	CCSQSL101J50	
	R1305, R1306	Not used	RS1/10S100J	
	R1307, R1308	Not used	RD1/2PMFL101J	
	R3001, R3002	RS1/10S102J	RS1/10S222J	

H. P MIC ASSY

AWZ7437 and AWZ7438 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7437	AWZ7438	
	C1201, C1202	Not used	CCCSL101J50	

TUNER MODULE (AXQ3212: XR−J130/MEXK/EA, MEXK/EB and NBXK)

AXQ7015 (XR−J330/MEXK/EA, MEXK/EB and NBXK) and AXQ3212 (XR−J130/MEXK/EA, MEXK/EB and NBXK) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AXQ7015	AXQ3212	
	R6274, R6277	RS1/10S000J	Not used	

TUNER MODULE (AXQ3214: XR−J130/MEZIXK/DI)

AXQ7014 (XR−J330/MEZIXK/DI) and AXQ3214 (XR−J130/MEZIXK/DI) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AXQ7014	AXQ3214	
	R6274, R6277	RS1/10S000J	Not used	

■ PARTS LIST FOR XR−J130/MEXK/EA

Mark	No.	Description	Parts No.
	AF ASSY		
	SEMICONDUCTORS		
	IC2101		BU4052BCF
	IC4202		BU4066BCF
	IC4421		CXA1101P
	IC8151		CXA1372Q
	IC8301		CXD2508AQ
	IC1999		ICP−N20
⚠	IC8201, IC8202		LA6520
	IC3001, IC4101, IC4301, IC8401		NJM4558MD
	IC1101		PD4585A
	IC2103		PM0006A
	Q1051		2SA1048
	Q1002, Q1006, Q1040, Q3004, Q4113		2SA1515
	Q4352		2SA1515
	Q1005		2SB560
	Q4356		2SC2240
	Q4101, Q4102, Q4203−Q4206		2SC2458
	Q4301, Q4302, Q4305, Q4306		2SC2458
	Q4451−Q4454		2SC2458
	Q1003, Q4111, Q4161, Q4353 Q4354		2SC3377
	Q1403, Q4355, Q8401, Q8402		2SD2144S
	Q105		2SD438
	Q3001, Q3002, Q8301		2SK246
	Q4307, Q4308		2SK373
	Q1004, Q3003, Q4456, Q8302		DTA143ES
	Q8403, Q8404		DTA143ES
	Q1001, Q1007, Q1041, Q1100, Q3005		DTC143ES
	Q4112, Q4207 Q4351, Q4455		DTC143ES
	D1013−D1020		11ES2
	D1021, D1022, D1027, D1031−D1033		1SS254
	D1104, D1153, D3001, D3002		1SS254
	D4111−D4113, D4161, D4162		1SS254
	D4201, D4202, D4301−D4306		1SS254
	D4551, D4552 D8301		1SS254
⚠	D1001		D3SBA20 (B)
	D1023		MTZJ33B
	D1151, D1152		MTZJ5.1B/C
	D1011		MTZJ5.6B
	D8218		MTZJ6.2B/C
	D1010		MTZJ7.5B
⚠	D1003−D1006, D1035, D1998, D1999		S5566
⚠	D1007, D1008, D1034		S5688G
	COILS AND FILTERS		
	L8321		LAU1R2J
	L1101		LAU220J
	L4301, L4302		LTA472J
	L4303, L4304		LTA822J
	F4401, F4402		RTF1209
	TRANSFORMERS		
	T4351		ATX−043
	CAPACITORS		
	C4361 (2000P/630)		ACE1020
	C1009 (0.01/150		ACG1005
	C4319, C4320		CCCSL271K500
	C4323, C4324, C8322		CCSQCH100D50
	C3011, C3012		CCSQCH102J50
	C8407−C8410		CCSQCH121J50
	C8323		CCSQCH220J50
	C4353		CCSQCH221J50
	C8403−C8406		CCSQCH271J50
	C4998, C4999, C8401, C8402		CCSQCH391J50
	C4191, C4192		CCSQCH470J50
	C4101, C4102		CCSQCH471J50
	C4151, C4152, C4355		CCSQCH681J50
	C1112, C1113, C8350, C8351		CCSQSL101J50
	C8411, C8412		CEANP2R2M50
	C4303, C4304, C4451, C4452		CEAS010M50
	C2403, C2404		CEAS0R1M50
	C1019, C4359, C4360, C4364		CEAS100M50
	C4403−C4405, C4407, C4454		CEAS100M50
	C1011, C1016, C4401, C4408		CEAS101M10
	C1018		CEAS101M63
	C1004		CEAS102M35
	C1224		CEAS1R5M50
	C1007, C4453		CEAS220M50
	C1103		CEAS221M10
	C1017, C1099		CEAS221M35
	C1003		CEAS222M35
	C1001, C1002		CEAS222M50
	C4103, C4104, C4309, C4310		CEAS330M16
	C4317, C4318, C8301		CEAS330M16
	C8175, C8176		CEAS331M16
	C3017, C3018, C4357		CEAS3R3M50
	C1014, C2251, C2252, C3013, C3014		CEAS470M16
	C4107, C4108, C4351		CEAS470M16
	C1225		CEAS470M25
	C1021		CEAS470M50
	C2201, C2202, C3015, C3016		CEAS4R7M50
	C4207, C4208, C4301, C4302		CEAS4R7M50
	C4315, C4316, C8160, C8162		CEAS4R7M50
	C8309		CEASR47M50
	C4402, C4406		CEASR68M50
	C8302		CGCYX104K25
	C4363		CKCYB222K500
	C2203, C2209, C8171, C8321		CKSQYB102K50
	C4352, C4354, C8157, C8164, C8167		CKSQYB103K50
	C8169, C8218, C8308, C8361		CKSQYB103K50
	C3007, C3008, C4411, C4412, C8306		CKSQYB152K50
	C4313, C4314		CKSQYB182K50
	C4307, C4308		CKSQYB273K50
	C8170		CKSQYB332K50
	C4305, C4306, C8156, C8168		CKSQYB333K50
	C8172		CKSQYB472K50
	C8307		CKSQYB473K50
	C8155		CKSQYB561K50
	C2208, C3009, C3010		CKSQYB562K50
	C2210, C2211		CKSQYB822K50
	C8207, C8210, C8215, C8219		CKSQYF103Z50
	C1301−C1304, C2206, C2207, C2212		CKSQYF104Z50
	C8158, C8159, C8161, C8163, C8220		CKSQYF104Z50
	C8303, C8420, C8421		CKSQYF104Z50
	C1101, C1102, C1110, C1111, C1114		CKSQYF473Z50
	C4409, C4410		CQMA103J50
	C4358		CQMA123K250
	C4356		CQMA153J50
	C4362		CQMA562K400

Mark	No.	Description	Parts No.
	C4105, C4106		CQMA682J50
	C2204, C2205		CQMA683J50
	C4311, C4312		CQMA823J50
RESISTORS			
	VR4111	(2.2K)	PCP1025
	VR4301, VR4302	(4.7K)	PCP1028
	VR4201–VR4204	(10K)	PCP1029
	VR8151, VR8152	(22K)	PCP1030
	VR4351, VR4352	(220K)	PCP1033
	R4352		RD1/2PM102J
	R1157		RD1/2PM152J
	R1002		RD1/2PM272J
	R4353		RD1/2PM470J
	R1159–R1162		RD1/2PM680J
	R4357		RD1/2PM6R8J
	R3020–R3023		RD1/4PM100J
	R1064, R1153		RD1/4PM102J
	R4117		RD1/4PM122J
	R1995		RD1/6PM010J
	R1021, R1199, R3016, R8454		RD1/6PM102J
	R1003, R1022, R1102, R4112, R4416		RD1/6PM103J
	R4211, R4212		RD1/6PM153J
	R1041		RD1/6PM222J
	R1051		RD1/6PM331J
	R1151, R1178		RD1/6PM472J
	R3018, R3019, R4113, R4114		RD1/6PM820J
	R4323, R4324		RD1/6PM820J
	R1223		RS1LMF122J
	R1998		RS2LMF220J
	R1999		RS2LMF2R2J
	R1007, R1017		RS2LMFR22J
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN8131	FPC CONNECTOR 12P	12FMZ–ABT
	CN8202	MT CONNECTOR 4P	173981–4
	CN8205	MT CONNECTOR 5P	173981–5
		4P PIN JACK (VIDEO/AUX, PHONO)	AKB1124
		4P SPEAKER TERMINAL	AKE–109
		DC JACK	AKN–203
		CABLE HOLDER	AKT1007
		CABLE HOLDER	AKT1023
	X8301	(33.8688MHZ)	ASS7000
	CN4003	2P TOP POST	B2B–EH
	CN4002	3P TOP POST	B3B–EH
	CN4001	3P TOP POST	B3B–EH–R
	CN4	13P PLUG	KM200IA13
	CN10	5P JUMPER CONNECTOR	KPC5
	CN1	13P JUMPER CONNECTOR	KPE13
	CN8201	6P SIDE POST	VKN–004
	X1101	(4.19MHZ)	VSS1014
	CN9	14P CONNECTOR	KM200IA14

VR ASSY

SEMICONDUCTORS

	IC1501		NJM4558MD
	IC1551		TA8409S
	Q1501, Q1502		2SC2458
	Q1503		DTA143ES

Mark	No.	Description	Parts No.
CAPACITORS			
	C1555, C1556		CCSQSL221J50
	C1511, C1512		CEAS010M50
	C1599		CEAS470M50
	C1501–C1504		CEAS4R7M50
	C1557, C1558		CKSQYB333K50
	C1551–C1553		CKSQYF104Z50
RESISTORS			
	VR301	(100K–B×2)	RCX1052
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN1004	13P SOCKET	KP200IA13L

SECONDARY ASSY

OTHERS

		CABLE HOLDER	AKT1007

PRIMARY ASSY

OTHERS

⚠	H1105, H1106		AKR1003

DISPLAY ASSY

SEMICONDUCTORS

	IC3701–IC3703		NJM4558DX
	IC1901		PDC025A
	Q1708		2SA1048
	Q1901		2SC2458
	Q1701–Q1703		DTA143ES
	Q1902		DTC143ES
	D1801–D1809, D1901, D1903		1SS254
	D1905–D1908, D1910, D3701–D3704		1SS254
	D1713, D9801, D9802		BR3372XJ65A
	D3751, D3752		MTZJ5.1B/C
	D1904		MTZJ6.8B
	D1708		SLR–342MGTF7

COILS AND FILTERS

	L1901		LAU220J

SWITCHES AND RELAYS

	S1801–S1804, S1809, S1814, S1820		ASG1051
	S1822–S1836, S1838–S1840		ASG1051

CAPACITORS

	C1903		ACH1246
	C1908		CEAS010M50
	C1910		CEAS100M50
	C3751, C3752		CEAS220M10
	C1906		CEAS331M10
	C1902		CEAS470M16
	C1917		CEAS470M50
	C1907		CEASR47M50
	C1913		CGCYF104Z25
	C3705, C3706		CGCYX123K25
	C3701, C3704, C3707, C3710		CGCYX473K25
	C3702, C3703		CGCYX823K25
	C1909		CKCYB102K50
	C3708, C3709		CKCYB182K50
	C3711, C3712		CKCYB331K50

Mark	No.	Description	Parts No.
	C1901, C1904, C1905, C1912		CKCYF473Z50
	C1911		CKPUYF223Z25
RESISTORS			
	R1751		RA14T104J
	R1752		RA7T104J
	Other Resistors		RD1/6PM□□□J
OTHERS			
	V1702	FL TUBE	AAV7015
		CABLE HOLDER	AKT1011
		REMOTE RECEIVER UNIT	GP1U28X
	X1901	(6.00MHZ)	VSS1045

H. P MIC ASSY

Mark	No.	Description	Parts No.
RESISTORS			
	R1201, R1202		RS2LMF331J
OTHERS			
	CN1251	MINI JACK	AKN1028

DECK SW 1 ASSY

DECK SW 1 assy of XR−J130 is the same as that of XR−J330.

DECK SW 2 ASSY

DECK SW 2 assy of XR−J130 is the same as that of XR−J330.

FRONT 50W ASSY

FRONT 50W assy of XR−J130 is the same as that of XR−J330.

REGULATOR ASSY

REGULATOR assy of XR−J130 is the same as that of XR−J330.

MECHANISM BOARD ASSY

MECHANISM BOARD assy of XR−J130 is the same as that of XR−J330.

5. ADJUSTMENTS

5.1 TUNER SECTION

■ FM Tuner Section

- Set the mode selector to FM BAND.
- Connect the wiring as shown in Fig. 1−1.

- For MEXK/EA, MEXK/EB and NBXK types (AXQ7015 and AXQ3212)

Step No.	Adjustment Title	FM SG (1kHz, ±75kHz dev.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dBμV)			
1	Center Adjustment	98 Non modulation	80 or more	—	L6207	Adjust so that the DC voltage between IC6201-Pin 4 and Pin 28 (or ⊕ leads of C6224 and C6261) becomes 0V±50mV.
2	Front End Sensitivity	98	0−30	98MHz	L6102 T6101	Adjust so that the DC voltage between the IC6201-Pin 12 and GND (or ⊕ leads of C6238 and GND) becomes at maximum level.
3	Stereo Distortion	98	80	98MHz	T6101	Minimize the distortion with 1/8 rotation of the core.
4	TUNED IND. Lighting Level	98	15±2	98MHz	VR6201	Adjust so that the indicator of TUNED IND. starts to light up.

Notes:

- *Before adjusting, make sure there is no gap between L6101 and L6102. If there is a gap between them, bring them into contact with each other first, and then make adjustments.*
- *Make indicator adjustments in order of AM → FM.*

- For MEZIXK/DI type (AXQ7014 and AXQ3214)

Step No.	Adjustment Title	FM SG (1kHz, ±75kHz dev.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dBμV)			
1	Center Adjustment	98 Non modulation	80 or more	98MHz	L6207	Adjust so that the DC voltage between IC6201-Pin 4 and Pin 28 (or ⊕ leads of C6224 and C6261) becomes 0V±50mV.
2	Front End Sensitivity	106	0−30	106MHz	L6104 L6105 L6102 T6101	After adjusting L6104 and L6105 so that the DC voltage between IC6201-Pin 12 and GND (or ⊕ leads of C6238 and GND) becomes at maximum level, adjust T6101 and L6102.
3	Stereo Distortion	98	80	98MHz	T6101	Minimize the distortion with 1/8 rotation of the core.
4	TUNED IND. Lighting Level	98	15±2	98MHz	VR6201	Adjust so that the indicator of TUNED IND. starts to light up.

Notes:

- *Before adjusting, make sure there is no gap between L6101 and L6102 and between L6103 and L6104. If there is a gap between them, bring them into contact with each other first, and then make adjustments.*
- *Make indicator adjustments in order of AM → FM.*
- *Adjustment sequence : L6104 → L6105 → L6102 → T6101*

■ AM Tuner Section

- Set the mode selector to AM BAND.
- Connect the wiring as shown in Fig. 1− 1.

Step No.	Adjustment Title	AM SG (400Hz, 30% Mod.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (kHz)	Level (dBμV/m)			
1	TUNED IND. Lighting Level	999	47±2	999kHz	VR6202	Adjust so that the indicator of TUNED IND. starts to light up.

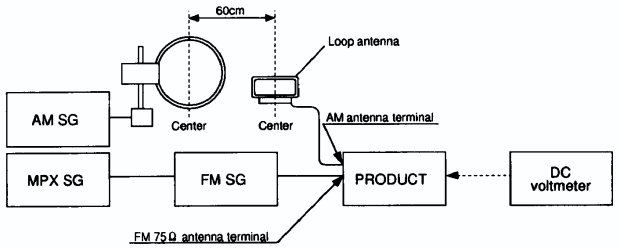
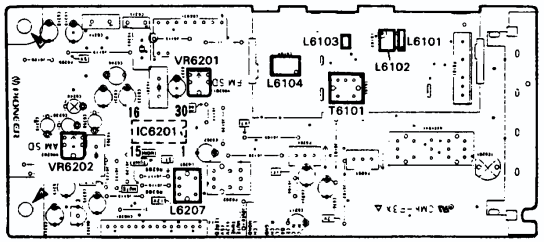


Fig. 1−1 AM and FM Adjustment Wiring Diagram

FM/AM TUNER MODULE (AXQ7015 and AXQ3212)



FM/AM TUNER MODULE (AXQ7014 and AXQ3214)

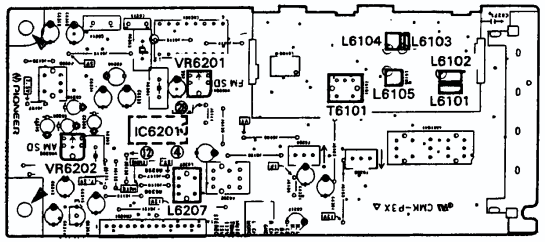


Fig. 1−2 Adjustment Points

5.2 POWER AMP MODULE SECTION (Refer to Fig. 2−1.)

1. Handling Precautions

- Since the heat sink and transistor metallic parts are connected to the Front Amp output, make sure they do not contact the GND (chassis) or other circuits.
- Since there is residual high voltage in the Power Amp Module ±B1 (FRONT 50W ASSY) and ±B2 (REGULATOR ASSY) even when the power is OFF, caution should be exercised. (If necessary, the voltage should be discharged).
- When handling the Power Amp Module, make sure you do not touch the fan motor blade.

2. Adjustment and Confirmation of Idle Current

- Basically, the idle current needs to be confirmed when replacing a power transistor, driver transistor, or bias transistor, or when the entire split board Assy of the Power Amp Module has been replaced.
- Make sure the heat sink has cooled sufficiently before measuring the idle current. (Temperature should be the same as room temperature; 25°C is ideal, if possible.)
- Idle current stipulated value: 3−100mA.

■ Front Amp Side (FRONT 50W ASSY)

Step	Measurement	Item	Remarks
1	Lch side	Insert a resistor (0.22Ω, 3W or more) in series in the connector CN7502 +B1 (or −B1) line (terminal No. 5 or 6). (Refer to Fig. 2−2.)	For measuring voltage at both sides of resistor
2		Short both sides of C7524.	Do not operate Rch side.
3		Turn the power ON, wait 6 seconds, and then measure the resistance voltage in Step 1.	Lch Idle current I=V/0.22
4	Rch side	● Same as Step 1 above. ● Short both sides of C7523.	Do not operate Lch side.
5		Turn the power ON under the above conditions, and after 6 seconds measure the resistance voltage in Step 1.	
6	——	If the measured idle current is greater than 100mA, perform the following procedure.	
7	Lch side	Short between the Point Ⓐ pattern in Fig. 2−3 using solder.	Connect R7517 to R7515 in a parallel circuit.
8	Rch side	Short between the Point Ⓑ pattern in Fig. 2−3 using solder.	Connect R7518 to R7516 in a parallel circuit.
9	——	After performing Steps 7 and 8, remeasure the idle current and confirm that it is below 100mA.	
10	——	If the measured idle current is below 3mA, perform the following procedure.	
11	Lch side	Short between the Point Ⓒ pattern in Fig. 2−3 using solder.	Connect R7551 to R7519 in a parallel circuit.
12	Rch side	Short between the Point Ⓓ pattern in Fig. 2−3 using solder.	Connect R7552 to R7520 in a parallel circuit.
13	——	After performing Steps 11 and 12, remeasure the idle current and confirm that it is greater than 3mA. (Within 3−100mA)	

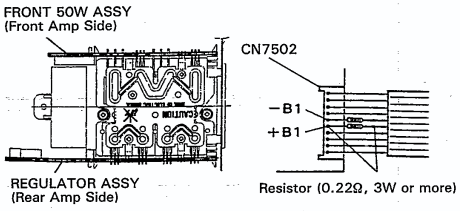


Fig. 2−1 Power Amp Module (POWER MOD. F50)

Fig. 2−2 FRONT 50W ASSY

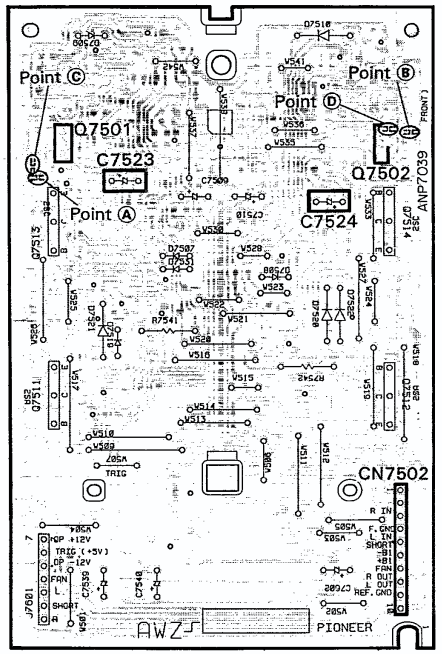


Fig. 2−3 FRONT 50W ASSY

3. Adjusting the Operating Temperature Setting of the Fan Motor (VR7201)

This adjustment is necessary when IC7401 (+12V regulator), Q7301 and Q7302 (temperature sensors), IC7201 (protection IC), or VR7201 has been replaced, or when the entire split board Assy of the Power Amp Module has been replaced.

■ Adjustment-Related Cautions

- Make sure the heat sink has sufficiently cooled (is the same as room temperature Ta.)
- Once the power has been turned ON, make measurements and adjustments as quickly as possible. (If too much time is taken, the heat sink temperature will rise, and the measurements will deviate from the Ta measurement point.)

■ Adjustment

1. Connect a voltmeter between TEMP and VL (or between IC7201 terminals No.7 and 9). (Refer to Fig. 2−4.)
2. Determine the fan motor operating temperature setting by means of the following formula. (Tolerance is within ±30mV.)
   Formula: (75°C − Ta) × 19 (mV)
   Ta: ambient temperature (°C)
3. Adjust VR7201 so that the voltage between TEMP and VL is the value obtained from the above formula.

   For example:
   when the room temperature is 25°C,
   set value = (75 − 25) × 19 (mV)
   = 950mV (tolerance within ±30mV).

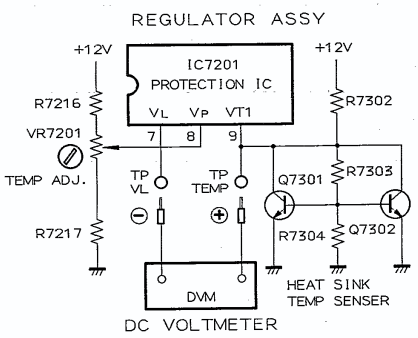


Fig. 2−4 Adjustment of Operating Temperature Setting of Fan Motor

5.3 CASSETTE DECK SECTION

- Adjustment points and test points are shown in Fig. 3−2 and Fig. 3−4.

■ Mechanical Adjustment

- Set the TAPE function.
- Test tape: STD−301 (3kHz, 30min).

1. Tape Speed Adjustment

No.	Mode	Test Tape	Adjusting Points	Measurement Points	Adjustment Procedure	Remarks
1	PLAY	STD−301 (Playback: 3kHz)	DECK Unit VR4111	TAPE TEST POINT (Rch) (AF Assy)	Press the PLAY SW and adjust so that the reading becomes 3010Hz±10Hz. Confirm that wow & flutter level is below 0.2% (in the reverse direction, confirm that the reading is within 3010Hz±60Hz).	

■ Electrical Adjustment

Check the following before starting.

1. Confirm that the tape speed adjustment has been completed.
2. Clean the heads and demagnetize them using a head eraser.
3. Set the measurement level to 0 dBV = 1 Vrms.
4. Use the specified tape for adjustment. Use the labeled (A) side of the test tape.
   STD−331E: For playback adjustment
   STD−631: Normal blank tape
5. Provide yourself with the following measuring devides:
   - AC millivoltmeter
   - Low-frequency oscillator
   - Attenuator
   - Oscilloscope
6. Adjust both right and left channels unless otherwise specified.
7. Turn the DOLBY NR switch off unless otherwize specified.
8. Warm up the unit for several minutes before adjustment. In particular, be sure to warm up the unit in the REC/PLAY mode for 3 to 5 minutes before starting recording/playback frequency characteristics adjustment.
9. Always follow the indicated adjustment order. Otherwise, a complete adjustment may not be achieved.

Playback Adjustment (Decks I and II)

1. Head Azimuth Adjustment
2. Playback Level Adjustment

Recording Adjustment (Deck II)

1. Bias Oscillation Frequency Adjustment
2. Recording Bias Adjustment
3. Recording Level Adjustment.
4. ALC Operation Check

**As the reference recording level is 250nwb/m for STD−331E, the recording level will be higher by 4 dB for STD−331B (160nwb/m). When adjusting, pay carefull attention to the type of tape used.*

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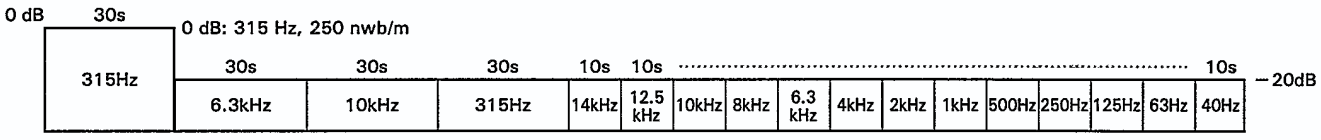


Fig. 3−1 STD−331E Test Tape

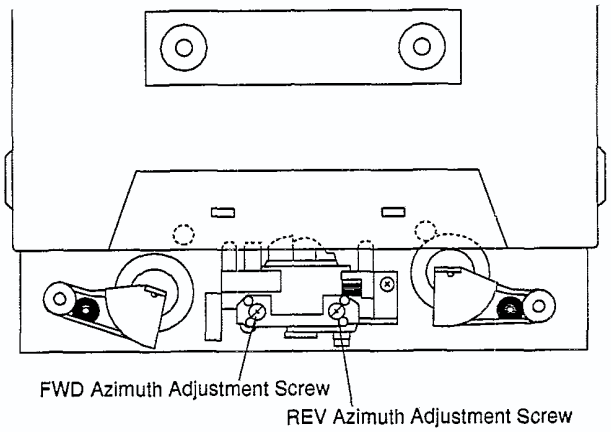


Fig. 3－2 Head Azimuth Adjustment

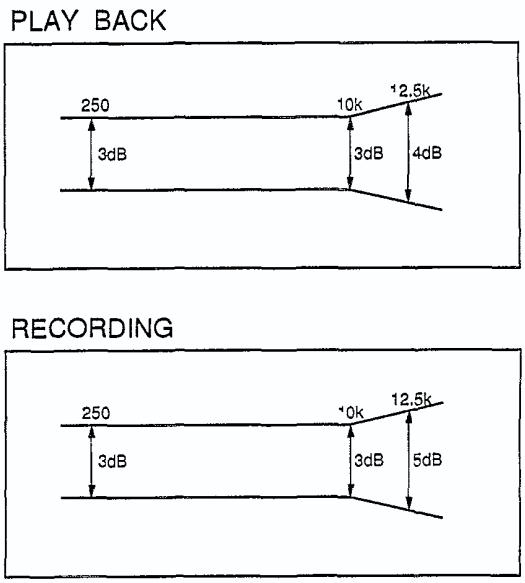


Fig. 3－3 Frequency Characteristics

● Playback Adjustment

1. Head Azimuth Adjustment

- This unit is equipped with auto tape selector.
- Do not switch between forward and reverse operation with the screwdriver inserted.

Step	Tape Selector (AUTO)	Mode	Input Signal／Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	PLAY	STD－331E test tape (Playback: 10kHz, －20dB)	Deck I	Head azimuth adjustment screw (Fig. 3－2)	TAPE TEST POINT (L, Rch) (AF Assy)	Max. playback signal level	After adjustment, apply lock paint to the head azimuth adjustment screw.
				Deck II				

2. Playback Level Adjustment

- Since this adjustment determines playback Dolby NR level, perform it carefully.

Step	Tape Selector (AUTO)	Mode	Input Signal／Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	PLAY	STD－331E test tape (Playback: 315Hz, 0dB)	Deck I	VR4201 (Lch) VR4202 (Rch)	TAPE TEST POINT (L, Rch) (AF Assy)	－4.2 dBV	
				Deck II	VR4203 (Lch) VR4204 (Rch)			

● Recording Adjustment

1. Bias Oscillation Frequency Adjustment

Step	Tape Selector (AUTO)	Mode	Input Signal/ Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	REC	Load the STD−631 test tape and set the recording mode.	Deck I	—	—	Oscillation frequency to be 105.0kHz ±2kHz.	When the power is turned ON while the MONO button is depressed, the frequency will decrease 2−3 kHz.
				Deck II	T4351	Between Ⓐ point in Fig. 3−4 and GND.		

2. Recording Bias Adjustment

● After the adjustment, caution should be exercised so as not to become under bias by checking the distortion rate.

Step	Tape Selector (AUTO)	Mode	Input Signal/Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	REC	Input a 315Hz signal to the VIDEO/AUX IN terminal and set the input selector to VIDEO.	Deck I	—	TAPE TEST POINT (L, Rch) (AF Assy)	−25.2 dBV	
				Deck II	Input signal level			
2	NORMAL	REC → PLAY	Load the STD−631 test tape and record/playback the 315Hz and 10kHz signals. (see the Note below)	Deck I	—	TAPE TEST POINT (L, Rch) (AF Assy)	Repeat adjustment until playback level of the 10kHz signal is within 0±0.5dB from that of the 315Hz signal.	
				Deck II	VR4351 (Lch) VR4352 (Rch)			

Note: Set the 10 kHz input signal level to the same value as the 315 Hz input signal level of step 1.

3. Recording Level Adjustment

Step	Tape Selector (AUTO)	Mode	Input Signal/Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	REC	Input a 315Hz signal to the VIDEO/AUX IN terminal and set the input selector to VIDEO.	Deck I	Input signal level	TAPE TEST POINT (L, Rch) (AF Assy)	−8.2 dBV	
				Deck II				
2	NORMAL	REC → PLAY	STD−631 test tape and record/playback the 315Hz signal.	Deck I	—	TAPE TEST POINT (L, Rch) (AF Assy)	Repeat recording, playback and adjustment until playback level of the 315Hz signal becomes −8.2dBV.	
				Deck II	VR4301 (Lch) VR4302 (Rch)			

4. ALC Operation Check

Step	Tape Selector (AUTO)	Mode	Input Signal/Test Tape	Adjusting Points	Measurement Points	Adjustment Value	Remarks
1	NORMAL	REC/ PAUSE	Input a 315Hz signal to the VIDEO/AUX IN terminal and set the input selector to VIDEO.	Input signal level	TAPE TEST POINT (L, Rch) (AF Assy)	−5.2 dBV	
2				Set to a level +10dB above the input level at step 1.		−2.2±2.5dBV	

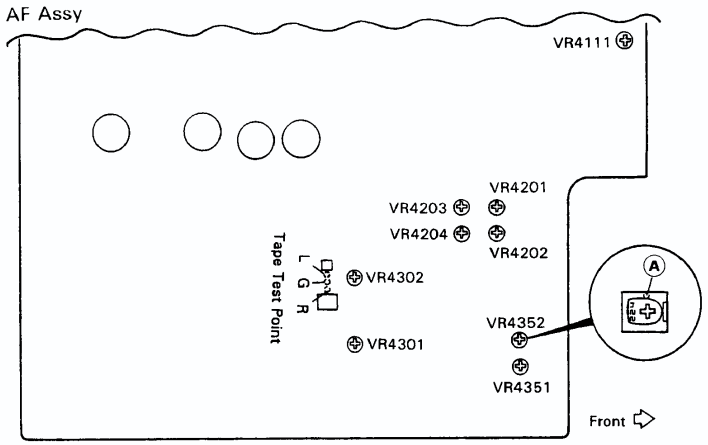


Fig. 3−4 Adjusting Points and Measurement Points

5.4 RDS ADJUSTMENT (FOR XR−J330 ONLY)

- Setting the RDS-Signal generator (*1).
- Set the mode selector to FM BAND.
- Connect the wiring as shown in Fig. 4−1

*Note *1 : Audio Main 1kHz, 85 % Pilot 10 % RDS 1.6 % SK 4.7 %*

Step No.	Adjustment Title	FM/AM SG		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dBμV)			
1	RDS (BPF) Level	88	60	88MHz	VR3501	Adjust so that the Waveform of RDS test point becomes at maximum. (Photo 1)
2	RDS IND. Lighting Level Verification	88	45	88MHz	—	Confirm that the RDS IND. to light up.

Note: Entry into RDS mode is done by switching to the FM band and entering an RDS signal from FM (RDS) SG to the FM 75Ω antenna terminal.

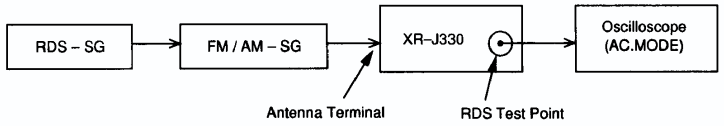


Fig. 4−1 RDS Adjustment Wiring Diagram

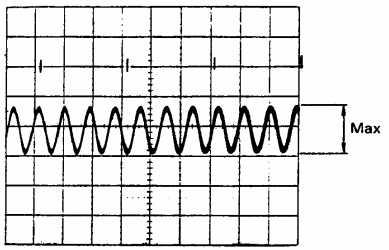
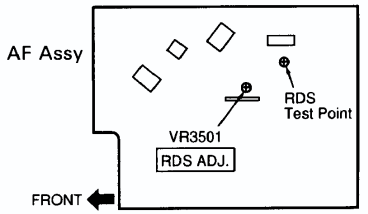


Photo 1



This diagram is viewed from the foil side.

Fig. 4−2 Adjustment Points

5.5 CD SECTION

■ Adjustment Methods

If a disc player is adjusted incorrectly or inadequately, it may malfunction or not work at all even though there is nothing at all wrong with the pickup or the circuitry. Adjust correctly following the adjustment procedure.

● Adjustment Items/Verification Items and Order

If the specified values cannot be obtained or no adjustment is possible by performing the verifications or adjustments described in steps 1−4, the pickup block may be defective.

Step	Item	Test Point	Adjustment Location
1	Focus offset verification	CN8201, Pin6 (FE)	None
2	Tracking error balance verification	CN8201, Pin2 (TE)	None
3	Pickup radial/tangential direction tilt adjustment	CN8201, Pin1 (RF)	Radial tilt adjustment screw, Tangential tilt adjustment screw
4	RF level verification	CN8201, Pin1 (RF)	None
5	Focus servo loop gain adjustment	CN8201, Pin5 (FI) CN8201, Pin6 (FE)	VR8152 (FOCUS)
6	Tracking servo loop gain adjustment	CN8201, Pin3 (TI) CN8201, Pin2 (TE)	VR8151 (TRACKING)

Abbreviation Table

FE : Focus Error
TE : Tracking Error
FI : Focus In
TI : Tracking In

● Measuring Instruments and Tools

1. Dual trace oscilloscope (10 : 1 probe)
2. Low-frequency oscillator
3. Test disc (YEDS−7)
4. Low pass filter (39kΩ + 0.001μF)
5. Resistor (100kΩ)
6. 8 cm disc (With at least about 20 minutes of recording)
7. Ball point hexagon wrench (GGK1002)
8. Standard tools

● Test Point and Adjustment Variable Resistor Positions

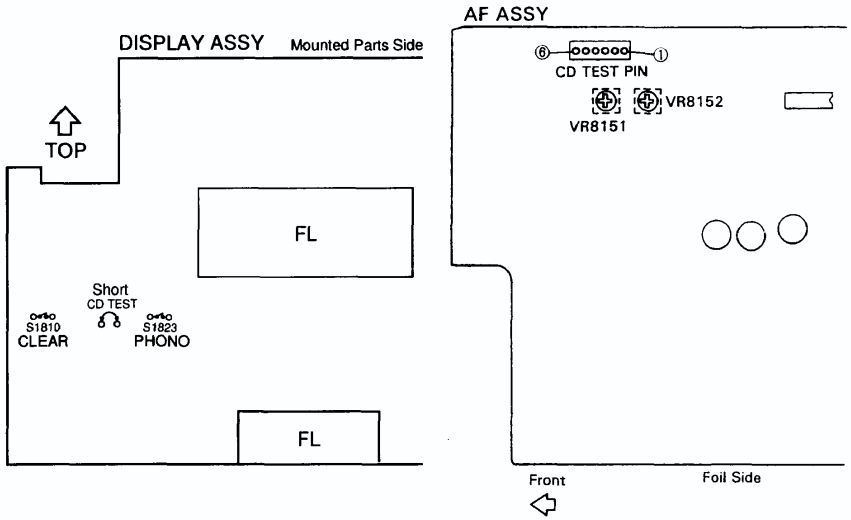


Fig. 5−1 Adjustment Location

● Notes

1. Use a 10 : 1 probe for the oscilloscope.
2. All the knob positions (settings) for the oscilloscope in the adjustment procedures are for when a 10 : 1 probe is used.
3. GND of the oscilloscope connect to CN8201, pin4 (VC). If GND is shorted to the ground of the player, the player should be damaged.

● Test Mode

These models have a test mode so that the adjustment and checks required for service can be carried out easily. When these models are in test mode, the keys on the front panel work differently from normal. Adjustments and checks can be carried out by operating these keys with the correct procedure. For these models, all adjustments are carried out in test mode.

[Setting these models to test mode]

How to set this model into test mode.

1. When the Power switch to activated, set the FUNCTION button to CD.
2. Short-circuit between both CD TEST points. (See Fig. 5−1)

When the test mode is set correctly, the display is different from what it usually is when the power is turned on. If the display is still the same as usual, test mode has not been set correctly, so repeat Steps 1−2.

[Release from test mode]

Here is the procedure for releasing the test mode:

1. Press the STOP key and stop all operations.
2. Turn off the power switch on the front panel.

[Operations of the keys in test mode]

Code	Key Name	Function in Test Mode	Explanation
	PGM	Focus servo close	The laser diode is lit up and the focus actuator is lifted up, then lowered slowly and the focus servo is closed at the point where the objective lens is focused on the disc. With the player in this state, if you lightly rotate the stopped disc by hand, you can hear the sound the focus servo. If you can hear this sound, the focus servo is operating correctly. If you press this key with no disc mounted, the laser diode lights up, the focus actuator is pulled up, then the actuator is lowered and raised three times and returned to its original position.
▷/▯▯	PLAY/PAUSE	Spindle servo ON	Starts the spindle motor in the clockwise direction and when the disc rotation reaches the prescribed speed (about 500rpm at the inner periphery), sets the spindle servo in a closed loop. Be careful. Pressing this key when there is no disc mounted makes the spindle motor run at the maximum speed. If the focus servo does not go correctly into a closed loop or the laser light shines on the mirror section at the outermost periphery of the disc, the same symptom is occurred.
		Tracking servo close/open	Pressing this key when the focus servo and spindle servo are operating correctly in closed loops puts the tracking servo into a closed loop, displays the track number being played back and the elapsed time on the front panel, and outputs the playback signal. If the elapsed time is not displayed or not counted correctly or the audio is not played back correctly, it may be that the laser is shining on the section with no sound recorded at the outer edge of the disc, that something is out of adjustment, or that there is some other problem. This key is a toggle key and open/close the tracking servo alternately. This key has no effect if no disc is mounted.

Code	Key Name	Function in Test Mode	Explanation
⏮◁◁ • ◁◁	MANUAL/ TRACK SEARCH REV	Carriage reverse (inwards)	Moves the pickup position toward the inner diameter of the disc. When this key is pressed with the tracking servo in a closed loop, the tracking servo automatically goes into an open loop. Since the motor does not automatically stop at the mechanical end point in test mode, be careful with this operation.
▷▷⏭ • ▷▷	MANUAL/ TRACK SEARCH FWD	Carriage forward (outwards)	Moves the pickup position toward the outer diameter of the disc. When this key is pressed with the tracking servo in a closed loop, the tracking servo automatically goes into an open loop. Since the motor does not automatically stop at the mechanical end point in test mode, be careful with this operation.
□	STOP	Stop	Initializes and the disc rotation stops. The pickup and disc remain where they are when this key is pressed.
⏏	OPEN/CLOSE	Disc tray open/close	Open/close the disc tray. This key is a toggle key and open/close tray alternately. Pressing this key when the disc is turning stops the disc, then opens the tray. This key operation does not affect the position of the pickup.

[How to playback a disc in test mode]

In test mode, since the servos operate independently, playing back a disc requires that you operate the keys in the correct order to close the servos.
Here is the key operation sequence for playing back a disc in test mode.

PGM — Lights up the laser diode and closes the focus servo.

⇩

▷/⏯ — Starts the spindle motor and closes the spindle servo.

⇩

▷/⏯ — Closes the tracking servo.

Wait at least 2−3 seconds between each of these operations.

1. Focus Offset Verification

● Objective ● Symptom when out of adjustment	Verify the DC offset for the focus error amp. The model does not focus in and the RF signal is dirty.		
● Measurement Instrument Connections	Connect the oscilloscope to CN8201, Pin6 (FE) and GND is to CN8201, Pin4 (VC). [Settings] 5mV/division 10ms/division DC mode	● Player State ● Adjustment Location ● Disc	Test mode, stopped (just the Power switch on) None None needed
[Procedure] Verify the DC voltage at CN8201, Pin6 (FE) is 0±50mV.			

Note: If the specified values cannot be obtained or no adjustment is possible by performing the verifications or adjustments described in adjustment items 1−4, the pickup block may be defective.

2. Tracking Error Balance Verification

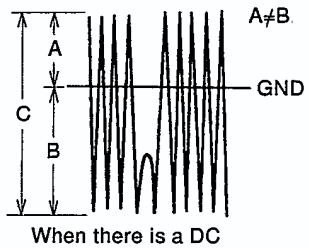
● Objective ● Symptom when out of adjustment	To verify that there is no variation in the sensitivity of the tracking photo diode. Play does not start or track search is impossible.		
● Measurement Instrument Connections	Connect the oscilloscope to CN8201, Pin2 (TE) and GND is to CN8201, Pin4 (VC). This connection may be via a low pass filter. [Settings] 50mV/division 5ms/division DC mode	● Player State ● Adjustment Location ● Disc	Test mode, focus and spindle servos closed and tracking servo open. None YEDS−7

[Procedure]

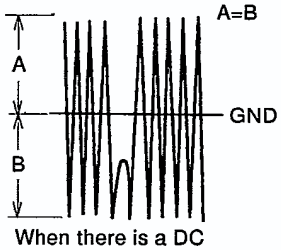
1. Move the pickup to midway across the disc (R=35mm) with the MANUAL/TRACK SEARCH FWD ▷▷ • ▷▷▯ key or REV ▯◁◁ • ◁◁ key.
2. Press the PGM key, then the PLAY/PAUSE ▷/▯▯ key in that order to close the focus servo then the spindle servo.
3. Line up the bright line (ground) at the center of the oscilloscope screen and put the oscilloscope into DC mode.
4. Supposing that the positive amplitude of the tracking error signal at CN8201, pin2 (TE) is (A) and the negative amplitude is (B), the following expression is satisfied.

When A≧B, $\frac{A-B}{C} \times \frac{1}{2} \leqq 0.1$

When A<B, $\frac{B-A}{C} \times \frac{1}{2} \leqq 0.1$



When there is a DC component



When there is a DC component

3. Pickup Radial/Tangential Tilt Adjustment

● Objective	To adjust the angle of the pickup relative to the disc so that the laser beams are shone straight down into the disc for the best read out of the RF signals.		
● Symptom when out of adjustment	Sound broken; some discs can be played but not others.		
● Measurement Instrument Connections	Connect the oscilloscope to CN8201, Pin1 (RF) and GND is to CN8201, Pin4 (VC). [Settings] 20mV/division 200ns/division AC mode	● Player State ● Adjustment Location ● Disc	Test mode, play Pickup radial tilt adjustment screw and tangential tilt adjustment screw 8 cm disc [Hewever, those with approx. 20 min of audio signal (music).]

[Procedure]

1. Press the MANUAL/TRACK SEARCH FWD ▷▷ • ▷▷| key or REV |◁◁ • ◁◁ key to move the pickup to the external circumference of the disc.
   Press the PGM key, the PLAY/PAUSE ▷/▯▯ key twice in that order to close the respective servos and put the player into play mode.
2. First, adjust the radial tilt adjustment screw with the hexagon wrench (GGK1002) so that the eye pattern (the diamond shape at the center of the RF signal) can be seen the most clearly.
3. Next, adjust the tangential tilt adjustment screw with the hexagon wrench (GGK1002) so that the eye pattern (the diamond shape at the center of the RF signal) can be seen the most clearly (Fig. 5−3).
   ※ The ball-point type hexagonal wrench is used because the disc will get in the way if a normal hexagonal wrench is used.
4. Adjust the radial tilt adjustment screw and the tangential tilt adjustment screw again so that the eye pattern can be seen the most clearly. As necessary, adjust the two screws alternately so that the eye pattern can be seen the most clearly.
5. When the adjustment is completed, lock the radial and tangential adjustment screw.

Note: Radial and tangential mean the directions relative to the disc shown in Fig. 5−2.

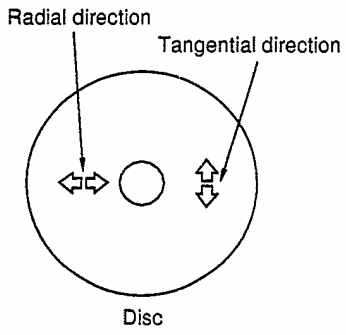
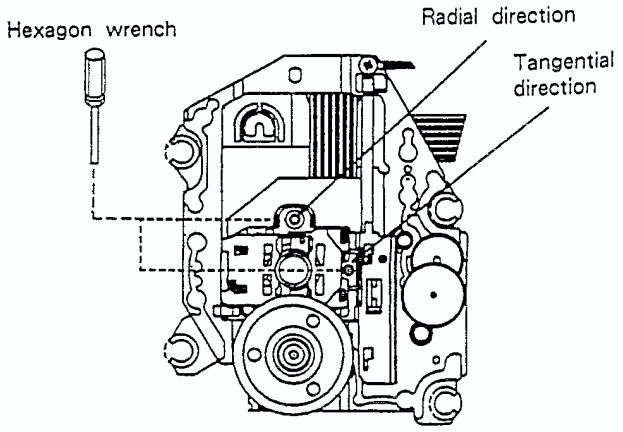


Fig. 5−2



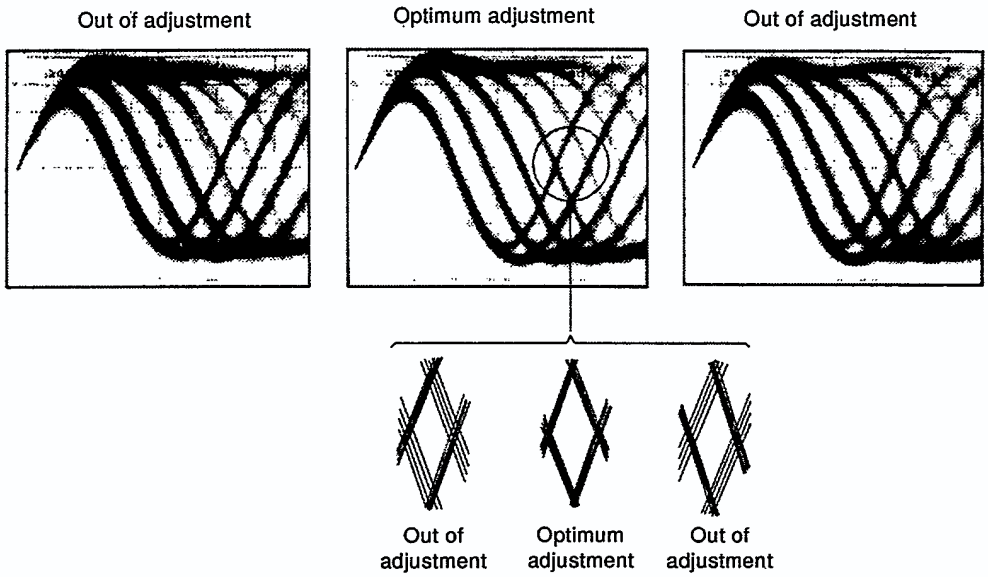


Fig. 5−3 Eye Pattern

4. RF Level Verification

● Objective ● Symptom when out of adjustment	To verify the playback RF signal amplitude. No play or no search		
● Measurement Instrument Connections	Connect the oscilloscope to CN8201, Pin1 (RF) and GND is to CN8201, Pin4 (VC). [Settings] 50mV／division 10ms／division AC mode	● Player State ● Adjustment Location ● Disc	Test mode, play None YEDS−7

[Procedure]

1. Move the pickup to midway across the disc (R=35mm) with the MANUAL／TRACK SEARCH FWD ▷▷ • ▷▷▯ key or REV ▯◁◁ • ◁◁ key, then press the PGM key, the PLAY／PAUSE ▷／▯▯ key twice in that order to close the respective servos and put the player into play mode.
2. Verify the RF signal amplitude is 1.2Vp−p±0.2V.

5. Focus Servo Loop Gain Adjustment

● Objective	To optimize the focus servo loop gain.		
● Symptom when out of adjustment	Playback does not start or focus actuator noisy.		
● Measurement Instrument Connections	See Fig. 5−4. [Settings] CH1 20mV/division X−Y mode CH2 5mV/division	● Player State ● Adjustment Location ● Disc	Test mode, play VR8152 (FOCUS) YEDS−7

[Procedure]

1. Set the AF generator output to 1.2kHz and 1Vp−p.
2. Press the MANUAL/TRACK SEARCH FWD ▷▷ • ▷▷▯ key or REV ▯◁◁ • ◁◁ key to move the pickup to halfway across the disc (R=35mm), then press the PGM key, the PLAY/PAUSE ▷/▯▯ key twice in that order to close the corresponding servos and put the player into play mode.
3. Adjust VR8152 (FOCUS) so that the Lissajous waveform is symmetrical about the X axis and the Y axis.

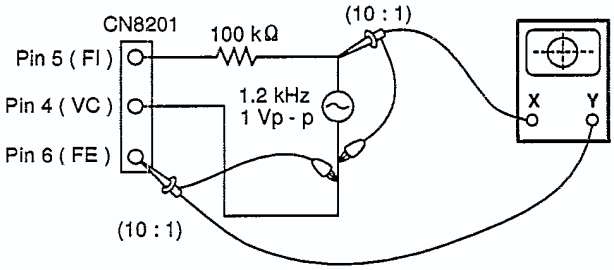
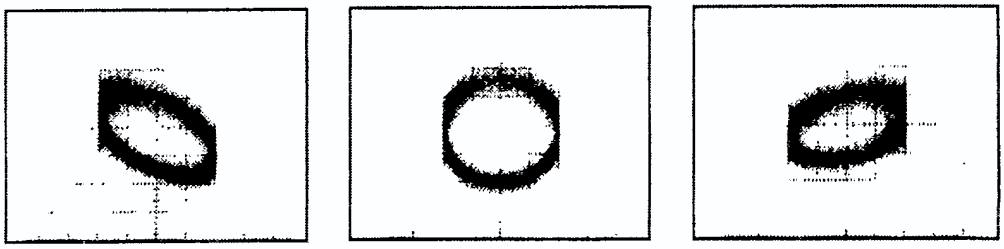


Fig. 5−4

Focus Gain Adjustment



Higher gain　　Optimumr gain　　Lower gain

6. Tracking Servo Loop Gain Adjustment

● Objective	To optimize the tracking servo loop gain.		
● Symptom when out of adjustment	Playback does not start, during searches the actuator is noisy, or tracks are skipped.		
● Measurement Instrument Connections	See Fig. 5−5. [Settings] CH1 50mV／division X−Y mode CH2 20mV／division	● Player State ● Adjustment Location ● Disc	Test mode, play VR8151 (TRACKING) YEDS−7

[Procedure]

1. Set the AF generator output to 1.2kHz and 2Vp−p.
2. Press the MANUAL／TRACK SEARCH FWD ▷▷ • ▷▷▯ key or REV ▯◁◁ • ◁◁ key to move the pickup to halfway across the disc (R=35mm), then press the PGM key, the PLAY／PAUSE ▷／▯▯ key twice in that order to close the corresponding servos and put the player into play mode.
3. Adjust VR8151 (TRACKING) so that the Lissajous waveform is symmetrical about the X axis and the Y axis.

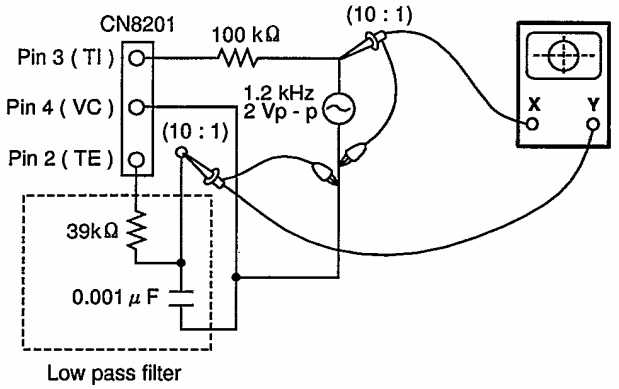
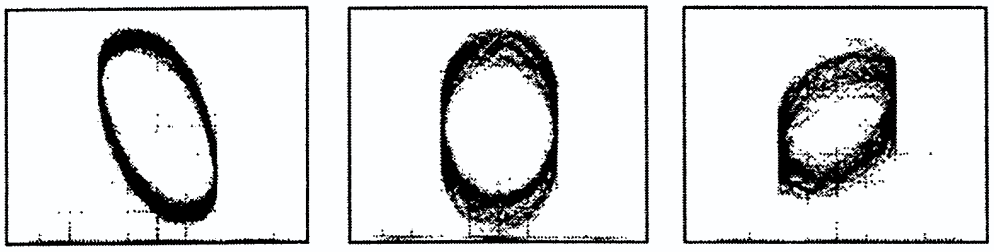


Fig. 5−5

Tracking Gain Adjustment



Higher gain　　Optimumr gain　　Lower gain

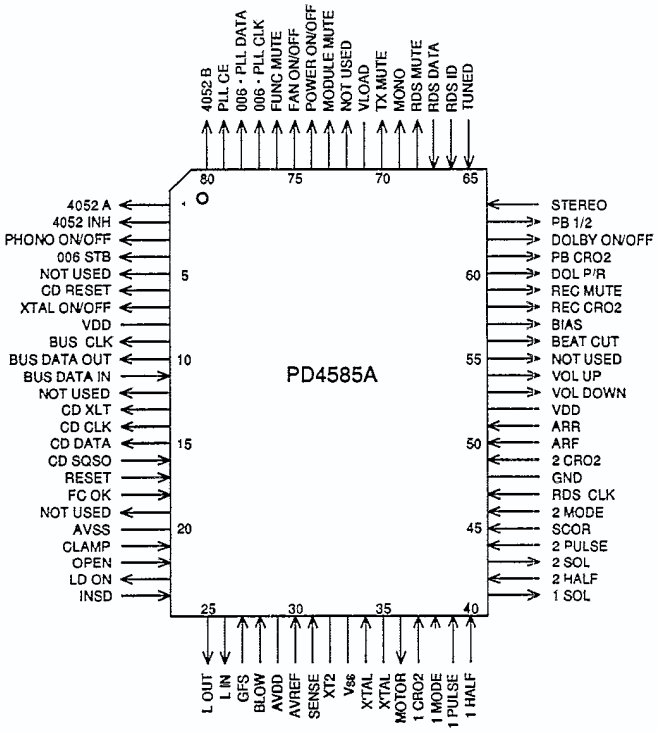
6. IC INFORMATION

- *The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.*

■ PD4585A (IC1101 : AF ASSY)

● System Control Micro-computer

- Pin Assignment (Top view)



- Pin Function

No.	Pin Name	Pin Function	I/O	Description
1	P94	4052A	O	Switching analog switch output
2	P93	4052INH	O	Analog switch inhibit output
3	P92	PHONO	O	Switching PHONO output
4	P91	006 STB	O	PD006A strobe output
5	P90	–	–	——
6	P81	$\overline{\text{CD RESET}}$	O	CD, reset output
7	P80	XTAL ON/$\overline{\text{OFF}}$	O	CD, XTAL ON/OFF
8	VDD	VDD	–	+5V
9	SCK0	BUS CLK	O	DISPLAY μ-COM. communication CLK
10	SO0	BUS DATA OUT	O	DISPLAY μ-COM. DATA OUT
11	P25	BUS DATA IN	I	DISPLAY μ-COM. DATA IN
12	P24	–	–	——
13	P23	CD XLT	O	CD control (Latch)
14	P22	CD CLK	O	CD control (Clock)
15	P21	CD DATA	O	CD control (Data)
16	P20	CD SQSO	I	Sub code Q data serial input
17	$\overline{\text{RESET}}$	$\overline{\text{RESET}}$	–	Reset
18	P74	FCOK	I	Focus OK input
19	P73	–	–	——
20	AVss	–	–	GND
21	P17	CLMP	I	CD mechanism control input
22	P16	OPEN	I	
23	P15	LDON	O	Laser diode ON/OFF
24	P14	INSD	I	CD mechanism inside detection input
25	P13	LOUT	O	CD loading out
26	P12	LIN	O	CD loading in
27	P11	GFS	I	Frame sync lock
28	P10	BLOW	I	Blow detect
29	AVDD	VDD	–	+5V
30	AVREF	VDD	–	
31	P04	SENS	I	CD LSI operation status multi-mode input
32	XT2	–	–	——
33	Vss	–	–	GND

No.	Pin Name	Pin Function	I/O	Description
34	X1	XTAL	I	Connected to oscillator (4.19MHz)
35	X2	XTAL	O	
36	P37	MOTOR	O	Deck motor control
37	P36	1CRO2	I	CrO2 tape detection switch input (Mecha I)
38	P35	1MODE	I	Head base position detection switch input (Mecha I)
39	P34	1PULSE	I	Reel pulse input (Mecha I)
40	P33	1HALF	I	Cassette half detection switch input (Mecha I)
41	P32	1SOL	O	Solenoid control output (Mecha I)
42	P31	2HALF	I	Cassette half detection switch input (Mecha II)
43	P30	2SOL	O	Solenoid control output (Mecha II)
44	P03	2PULSE	I	Reel pulse input (Mecha II)
45	INTP2	SCOR	I	Subcode synch S0+S1 input
46	P01	2MODE	I	Head base position detection switch input (Mecha II)
47	INTP0	RDS CLK	I	RDS clock input *1
48	IC	–	–	GND
49	P72	2CRO2	I	CrO2 tape detection switch input (Mecha II)
50	P71	ARF	I	FWD REC prevention tab detection switch
51	P70	ARR	I	REV REC prevention tab detection switch
52	VDD	VDD	–	+5V
53	P127	VOL DOWN	O	VOLUME DOWN
54	P126	VOL UP	O	VOLUME UP
55	P125	–	–	——
56	P124	BEAT CUT	O	Switching beat cut output
57	P123	BIAS	O	REC BIAS circuit control output
58	P122	REC CRO2	O	Equalizer circuit control output for CrO2 tape when recording.

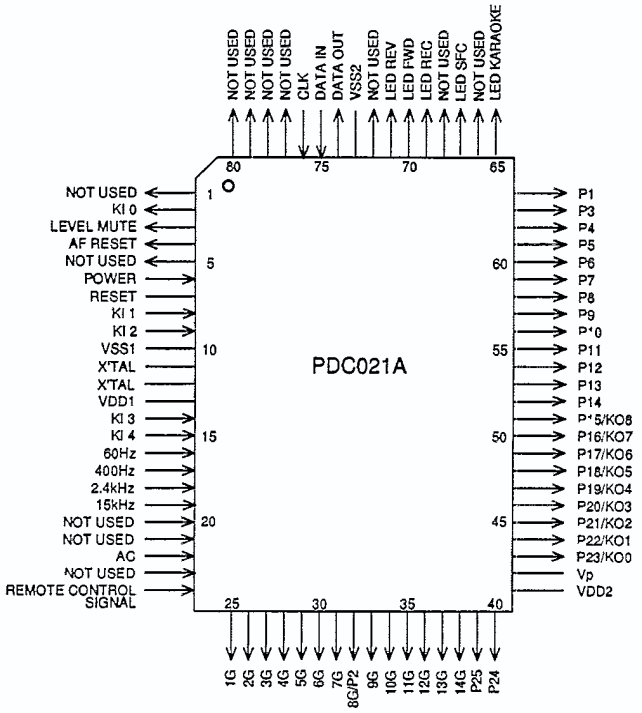
No.	Pin Name	Pin Function	I/O	Description
59	P121	REC MUTE	O	REC MUTE circuit control output
60	P120	DOLBY PB/REC	O	CXA1101 Playback/Recording control output
61	P117	PB CRO2	O	Equalizer circuit control output for CrO2 tape when playback.
62	P116	DOL ON/OFF	O	CXA1101 Dolby NR ON/OFF control output
63	P115	PB 1/2	O	Mecha I, II control output
64	P114	STEREO	I	STEREO status discrimination input
65	P113	TUNED	I	TUNE status discrimination input
66	P112	RDS ID	I	RDS tuning status discrimination input *1
67	P111	RDS DATA	I	RDS data input *1
68	P110	RDS MUTE	O	RDS circuit power supply control output *1
69	P107	MONO	O	Execution MONO control output
70	P106	TX MUTE	O	Tuner mute output
71	VLOAD	–	–	GND
72	P105	–	–	——
73	P104	MOD MUTE	O	Power module mute output
74	P103	POWER ON/OFF	O	Power ON/OFF
75	P102	FAN ON/OFF	O	Fan motor ON/OFF
76	P101	FUNC MUTE	O	Function mute output
77	P100	006 CLK	O	006 control clock output
78	P97	006 DA	O	006 control data output
79	P96	PLL CE	O	PLL IC control chip enable output
80	P95	4052B	O	Switching analog switch output

**1: XR–J330/MEXK/EA, MEXK/EB, NBXK and MEZIXK/DI only.*

■ PDC021A (IC1901 : DISPLAY ASSY: FOR XR−J330)

● Display Control Micro-computer

● Pin Assignment (Top view)



● Pin Function

No.	Pin Name	Pin Function	I/O	Description
1	P17	−	O	Not used
2	P30	KI0	I	Key IN 0
3	P31	LEVEL MUTE	O	Level meter mute
4	P32	AF RST	O	AF μ-com reset
5	P33	−	O	Not used
6	P70	POWER	I	POWER ON/OFF detection
7	RST	RST	−	μ-com reset
8	P74	KI1	I	Key IN 1
9	P75	KI2	I	Key IN 2
10	VSS1	VSS1	−	GND
11	CF1	CF1	I	Connected to oscillator (6.00MHz)
12	CF2	CF2	O	

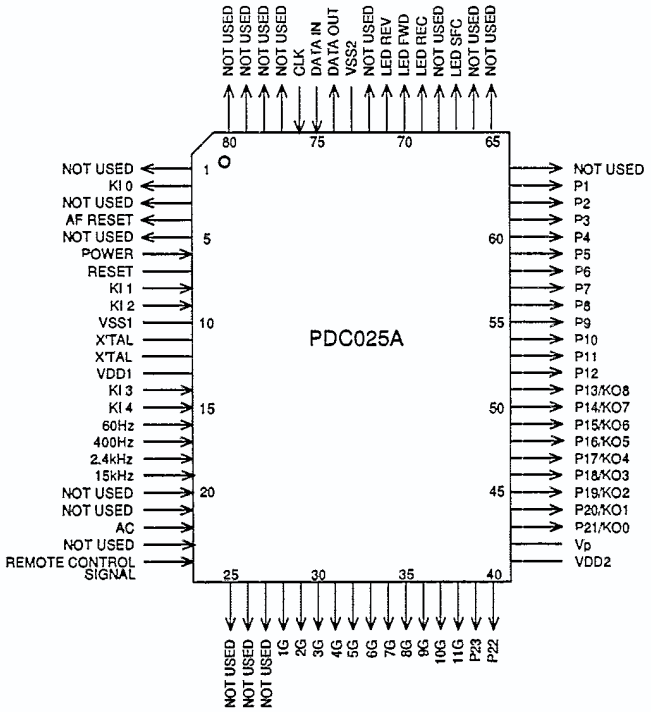
No.	Pin Name	Pin Function	I/O	Description
13	VDD1	VDD1	−	Power supply for μ-com
14	P80	KI3	I	Key IN 3
15	P81	KI4	I	Key IN 4
16	AN2	60Hz	I	Spectrum analyzer light up level input
17	AN3	400Hz	I	
18	AN4	2.4kHz	I	
19	AN5	15kHz	I	
20	AN6	−	I	Not used
21	AN7	−	I	
22	INT1	AC	I	AC Clock (reading power supply frequency)
23	P72	−	I	Not used
24	INT3	REM IN	I	REMOCON IN
25	T0	1G	O	FL grid 1
31	T6	7G		FL grid 7
32	T7	8G/P2	O	FL grid 8/FL segment 2
33	T8	9G	O	FL grid 9
38	T13	14G		FL grid 14
39	S14	P25	O	FL segment 25
40	S15	P24	O	FL segment 24
41	VDD2	VDD2	−	Power supply for μ-com
42	VP	VFDP	−	Power supply for FL port with high withstand voltage
43	S16	P23/KO0	O	FL segment 23/Key IN 0
49	S22	P17/KO6		FL segment 17/Key IN 6
50	S23	P16/KO7	O	FL segment 16/Key OUT 7
51	S24	P15/KO8	O	FL segment 15/Key OUT 8
52	S25	P14	O	FL segment 14
64	S37	P1		FL segment 1

No.	Pin Name	Pin Function	I/O	Description
65	P00	LED KARAOKE	O	LED KARAOKE
66	P01	–	O	Not used
67	P02	LED SFC	O	LED SFC
68	P03	–	O	Not used
69	P04	LED REC	O	LED REC (DECK)
70	P05	LED FWD	O	LED FWD (DECK)
71	P06	LED REV	O	LED REV (DECK)
72	P07	–	O	Not used
73	VSS2	VSS2	–	GND
74	SO0	D. OUT	O	DATA OUT (communication PD4585)
75	SB0	D. IN	I	DATA IN (communication PD4585)
76	SCK0	CLK	I	CLK (Clock)
77 | 80	P13 | P16	–	O	Not used

■ PDC025A (IC1901 : DISPLAY ASSY: FOR XR−J130)

● Display Control Micro-computer

● Pin Assignment (Top view)



● Pin Function

No.	Pin Name	Pin Function	I/O	Description
1	P17	–	O	Not used
2	P30	KI0	I	Key IN 0
3	P31	–	O	Not used
4	P32	AF RST	O	AF μ-com reset
5	P33	–	O	Not used
6	P70	POWER	I	POWER ON/OFF detection
7	RST	RST	–	μ-com reset
8	P74	KI1	I	Key IN 1
9	P75	KI2	I	Key IN 2
10	VSS1	VSS1	–	GND
11	CF1	CF1	I	Connected to oscillator (6.00MHz)
12	CF2	CF2	O	

No.	Pin Name	Pin Function	I/O	Description
13	VDD1	VDD1	–	Power supply for μ-com
14	P80	KI3	I	Key IN 3
15	P81	KI4	I	Key IN 4
16	AN2	60Hz	I	Spectrum analyzer light up level input
17	AN3	400Hz	I	
18	AN4	2.4kHz	I	
19	AN5	15kHz	I	
20	AN6	–	I	Not used
21	AN7	–	I	
22	INT1	AC	I	AC Clock (reading power supply frequency)
23	P72	–	I	Not used
24	INT3	REM IN	I	REMOCON IN
25 to 27	T0 to T2	–	O	Not used
28 to 38	T3 to T13	1G to 11G	O	FL grid 1 to FL grid 11
39	S14	P23	O	FL segment 23
40	S15	P22	O	FL segment 22
41	VDD2	VDD2	–	Power supply for μ-com
42	VP	VFDP	–	Power supply for FL port with high withstand voltage
43 to 51	S16 to S24	P21/KO0 to P13/KO8	O	FL segment 21/Key IN 0 to FL segment 13/Key IN 8
52 to 63	S25 to S36	P12 to P1	O	FL segment 12 to FL segment 1
64	S37	–	O	Not used
65	P00	–	O	
66	P01	–	O	

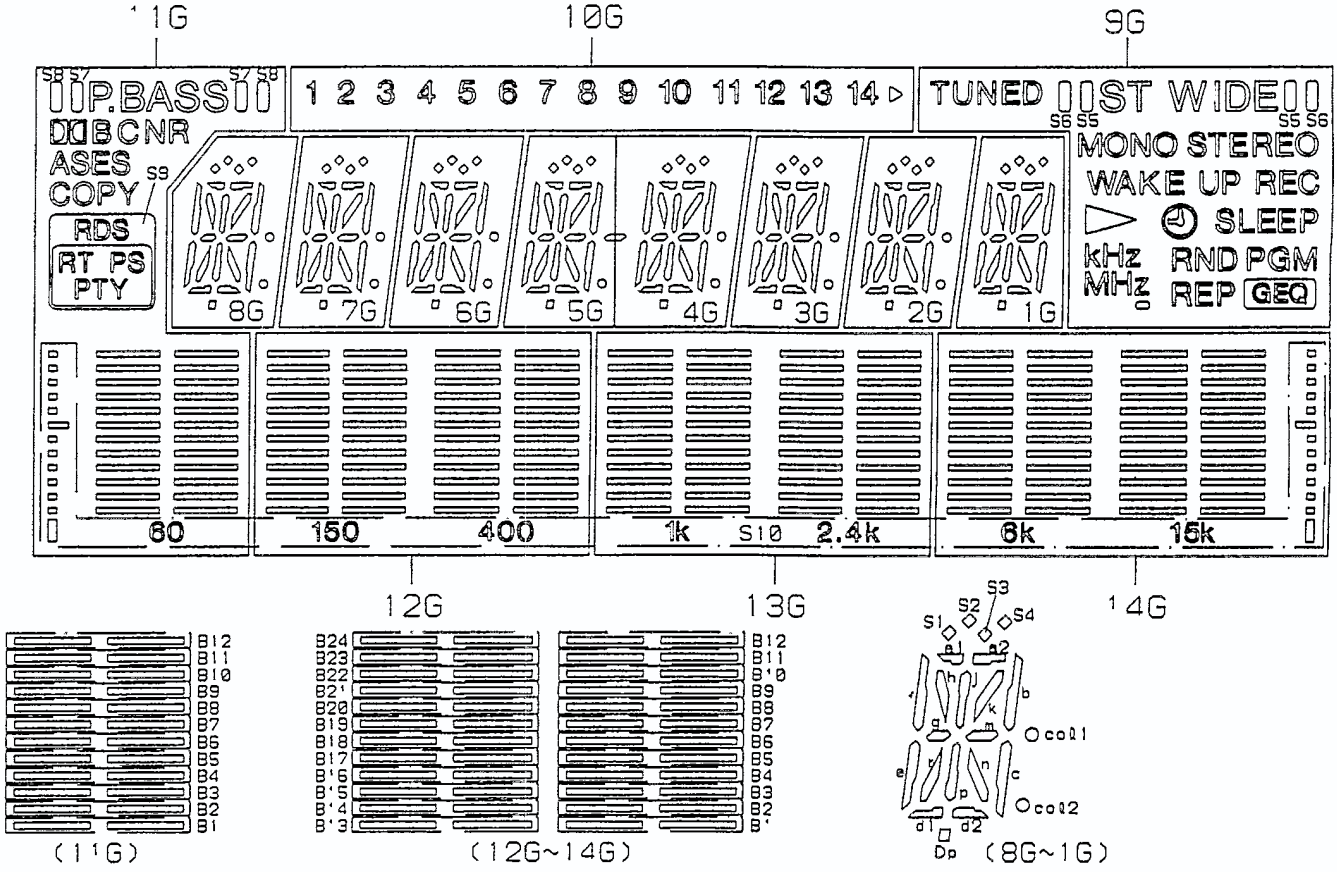
No.	Pin Name	Pin Function	I/O	Description
67	P02	LED SFC	O	LED SFC
68	P03	–	O	Not used
69	P04	LED REC	O	LED REC (DECK)
70	P05	LED FWD	O	LED FWD (DECK)
71	P06	LED REV	O	LED REV (DECK)
72	P07	–	O	Not used
73	VSS2	VSS2	–	GND
74	SO0	D. OUT	O	DATA OUT (communication PD4585)
75	SB0	D. IN	I	DATA IN (communication PD4585)
76	SCK0	CLK	I	CLK (Clock)
77 | 80	P13 | P16	–	O	Not used

7. FL INFORMATION

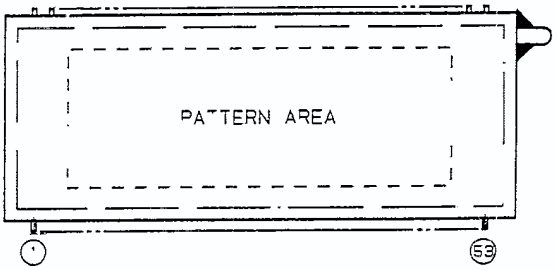
■ AAV7010 [V1701 : DISPLAY ASSY (For XR−J330)]

● FL Tube

● Grid Assignment



● Pin Assignment



● Pin Connection

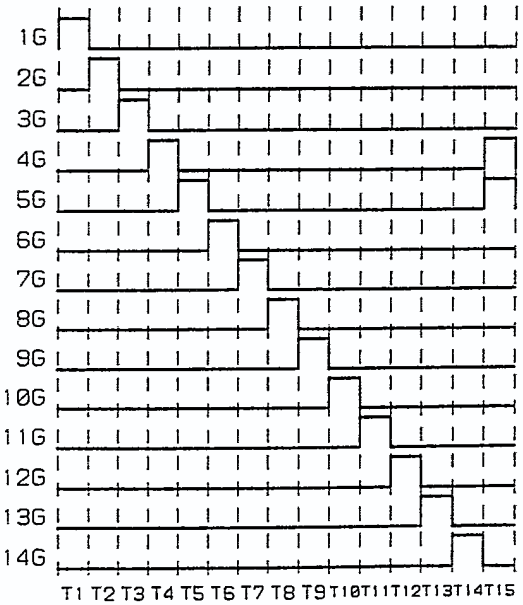
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
CONNECTION	F1	F1	F2	NP	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22	P23	P24	P25	NC	NC	NC	NC	NC	4G	3G	2G	1G	0G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NP	NP	F2	F2	F2

NOTE 1) F1, F2 ····· Filament
2) NP ····· No pin
3) NC ····· No connection
4) DL ····· Datum Line
5) 1G to 14G ····· Grid
6) The angle of the field of vision shall be 28.6° on the upper side and 26.6° on the lower side.

● Anode Connection

	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	B12	B12	B12	B12	13	RND	col1	col1	col1	col1	col1	col1	col1	–
P2	B11	B11	B11	B11	12	kHz	–	–	–	⬭		–	–	–
P3	B10	B10	B10	B10	11	SLEEP	f	f	f	f	f	f	f	f
P4	B9	B9	B9	B9	10	⏲	b	b	b	b	b	b	b	b
P5	B8	B8	B8	B8	9	▷	h	h	h	h	h	h	h	h
P6	B7	B7	B7	B7	8	REC	k	k	k	k	k	k	k	k
P7	B6	B6	B6	B6	7	WAKE UP	j	j	j	j	j	j	j	j
P8	B5	B5	B5	B5	6	STEREO	a2	a2	a2	a2	a2	a2	a2	a2
P9	B4	B4	B4	B4	5	MONO	a1	a1	a1	a1	a1	a1	a1	a1
P10	B3	B3	B3	B3	4	ST WIDE	S3	S3	S3	S3	S3	S3	S3	S3
P11	B2	B2	B2	B2	3	S5	S1	S1	S1	S1	S1	S1	S1	S1
P12	B1	B1	B1	B1	2	S6	S4	S4	S4	S4	S4	S4	S4	S4
P13	S10	S10	S10	S10	1	TUNED	S2	S2	S2	S2	S2	S2	S2	S2
P14	B13	B13	B13	S8	14	PGM	m	m	m	m	m	m	m	m
P15	B14	B14	B14	S7	▷	MHz	g	g	g	g	g	g	g	g
P16	B15	B15	B15	P.BASS	–	REP	c	c	c	c	c	c	c	c
P17	B16	B16	B16	DD NR	–	GEQ	e	e	e	e	e	e	e	e
P18	B17	B17	B17	C	–	○	n	n	n	n	n	n	n	n
P19	B18	B18	B18	B	–	–	r	r	r	r	r	r	r	r
P20	B19	B19	B19	ASES	–	–	p	p	p	p	p	p	p	p
P21	B20	B20	B20	COPY	–	–	col2	col2	col2	col2	col2	col2	col2	–
P22	B21	B21	B21	S9	–	–	d1	d1	d1	d1	d1	d1	d1	d1
P23	B22	B22	B22	RT	–	–	d2	d2	d2	d2	d2	d2	d2	d2
P24	B23	B23	B23	PS	–	–	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp
P25	B24	B24	B24	PTY	–	–	–	–	–	–	–	–	–	–

● Grid Timing Chart



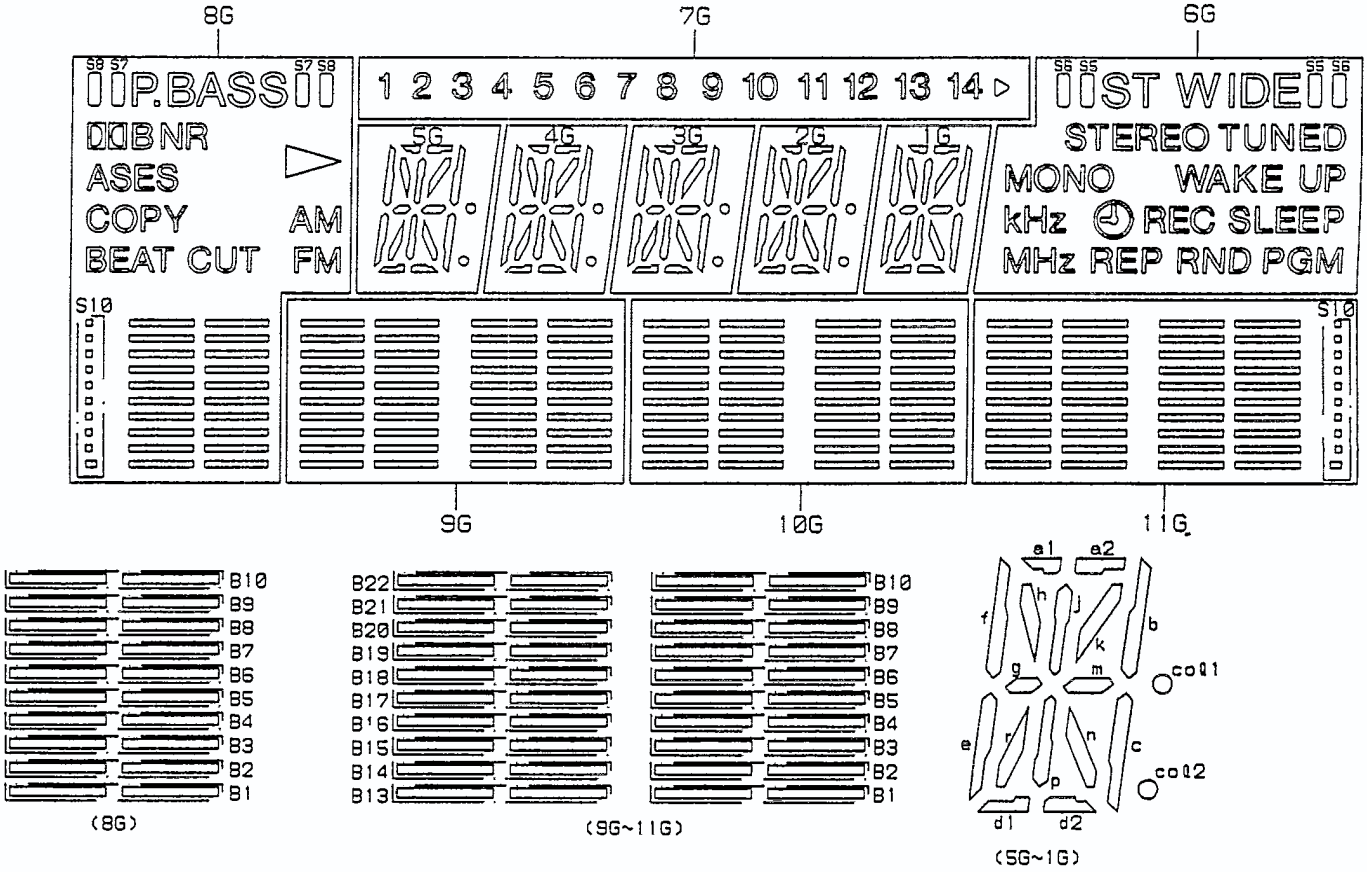
● Anode Timing Chart

	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	–
P2	T14	T13	T12	T11	T10	T9	–	–	–	T15		–	–	–
P3	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
P4	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
P5	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
P6	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
P7	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
P8	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
P9	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
P10	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
P11	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
P12	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
P13	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
P14	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
P15	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
P16	T14	T13	T12	T11	–	T9	T8	T7	T6	T5	T4	T3	T2	T1
P17	T14	T13	T12	T11	–	T9	T8	T7	T6	T5	T4	T3	T2	T1
P18	T14	T13	T12	T11	–	T9	T8	T7	T6	T5	T4	T3	T2	T1
P19	T14	T13	T12	T11	–	–	T8	T7	T6	T5	T4	T3	T2	T1
P20	T14	T13	T12	T11	–	–	T8	T7	T6	T5	T4	T3	T2	T1
P21	T14	T13	T12	T11	–	–	T8	T7	T6	T5	T4	T3	T2	T1
P22	T14	T13	T12	T11	–	–	T8	T7	T6	T5	T4	T3	T2	T1
P23	T14	T13	T12	T11	–	–	T8	T7	T6	T5	T4	T3	T2	T1
P24	T14	T13	T12	T11	–	–	T8	T7	T6	T5	T4	T3	T2	T1
P25	T14	T13	T12	T11	–	–	–	–	–	–	–	–	–	–

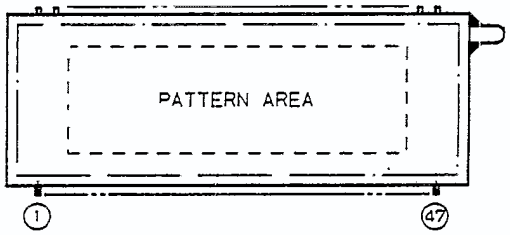
■ AAV7015 [V1702 : DISPLAY ASSY (For XR−J130)]

● FL Tube

● Grid Assignment



● Pin Assignment



● Pin Connection

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
CONNECTION	F1	F1	F1	NP	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22	P23	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	NC	NC	NC	NC	GND	GND	NP	NP	F2	F2	F2

NOTE 1) F1, F2 ····· Filament
2) NP ····· No pin
3) NC ····· No connection
4) DL ····· Datum Line
5) 1G to 11G ····· Grid

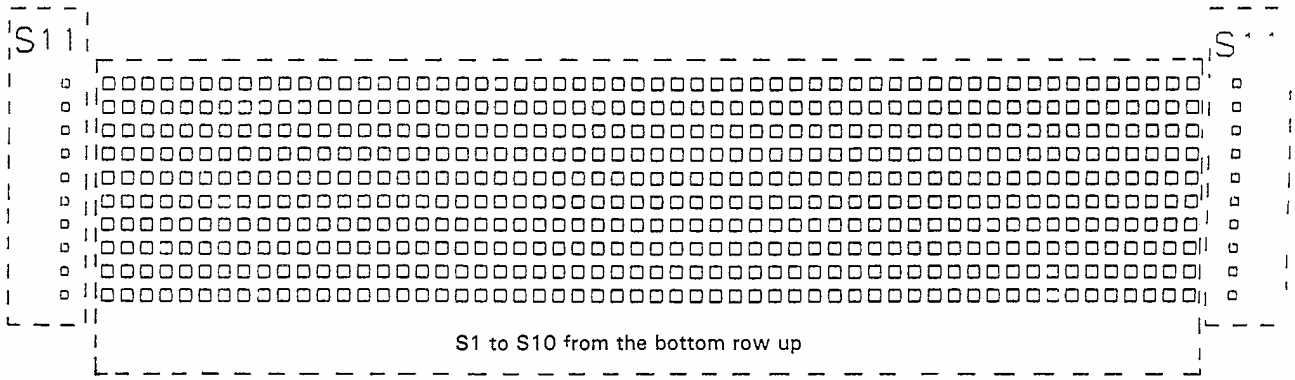
● Anode Connection

	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	–	–	–	–	13	RND	col1	col1	col1	col1	–
P2	–	–	–	▷	12	kHz	–	–	–	–	–
P3	B10	B10	B10	B10	11	SLEEP	f	f	f	f	f
P4	B9	B9	B9	B9	10	◴	b	b	b	b	b
P5	B8	B8	B8	B8	9	–	h	h	h	h	h
P6	B7	B7	B7	B7	8	REC	k	k	k	k	k
P7	B6	B6	B6	B6	7	WAKE UP	j	j	j	j	j
P8	B5	B5	B5	B5	6	STEREO	a2	a2	a2	a2	a2
P9	B4	B4	B4	B4	5	MONO	a1	a1	a1	a1	a1
P10	B3	B3	B3	B3	4	ST WIDE	–	–	–	–	–
P11	B2	B2	B2	B2	3	S5	–	–	–	–	–
P12	B1	B1	B1	B1	2	S6	–	–	–	–	–
P13	S10	–	–	S10	1	TUNED	–	–	–	–	–
P14	B13	B13	B13	S8	14	PGM	m	m	m	m	m
P15	B14	B14	B14	S7	▷	MHz	g	g	g	g	g
P16	B15	B15	B15	P.BASS	–	REP	c	c	c	c	c
P17	B16	B16	B16	DBNR	–	–	e	e	e	e	e
P18	B17	B17	B17	AM	–	–	n	n	n	n	n
P19	B18	B18	B18	FM	–	–	r	r	r	r	r
P20	B19	B19	B19	ASES	–	–	p	p	p	p	p
P21	B20	B20	B20	COPY	–	–	col2	col2	col2	col2	–
P22	B21	B21	B21	BEAT CUT	–	–	d1	d1	d1	d1	d1
P23	B22	B22	B22	–	–	–	d2	d2	d2	d2	d2

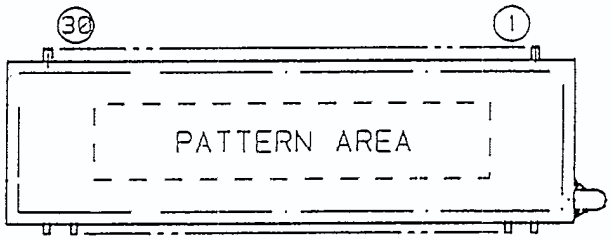
■ AAV1158 [V9701 : DISPLAY ASSY (For XR−J330)]

● FL Tube

● Segment Designation



● Pin Assignment

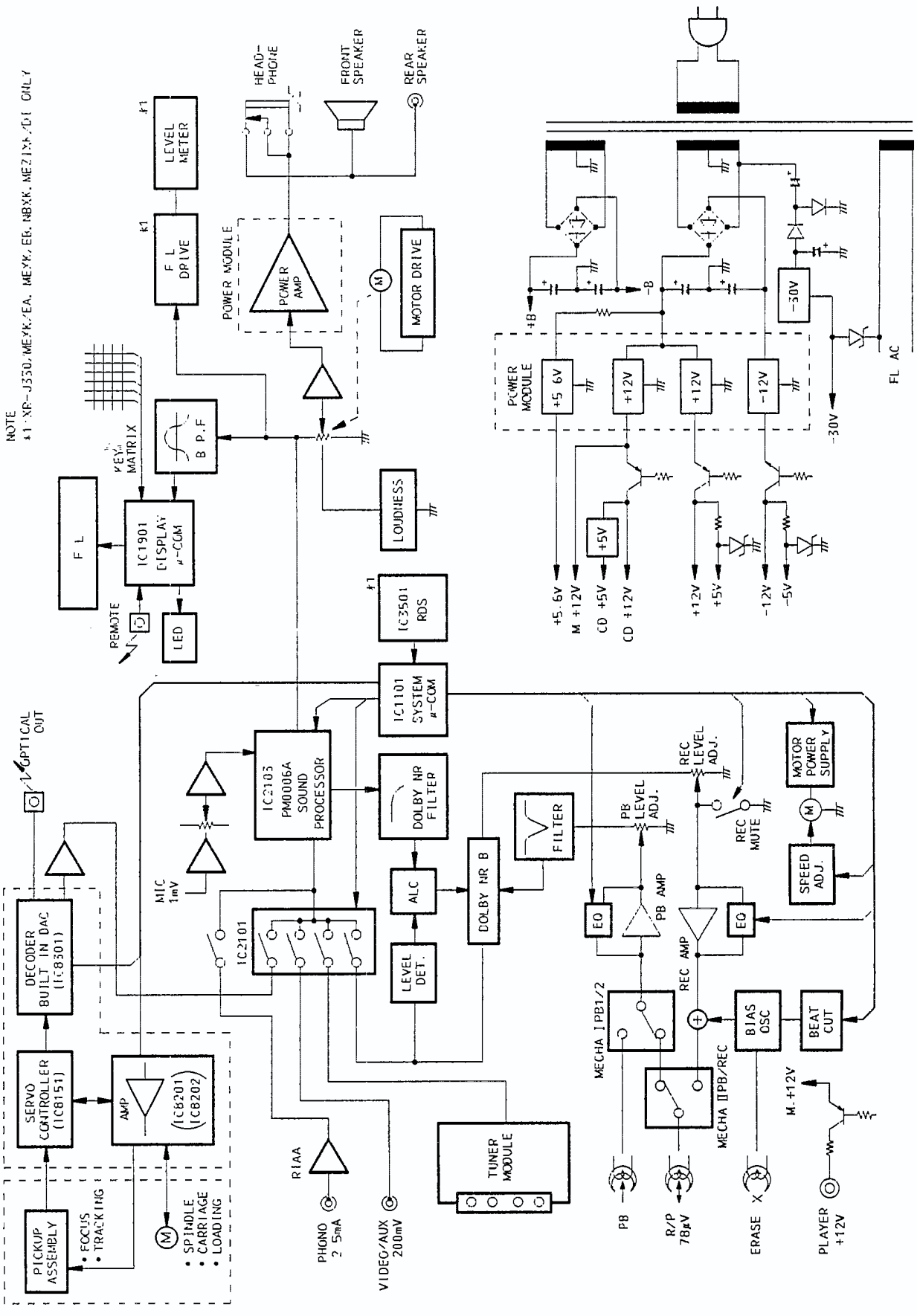


● Pin Connection

PIN NO.	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
CONNECTION	F2	F2	NP	NC	NC	NC	NC	NC	S7	S8	S9	S10	S6	S5	S4	S3	S2	S1	S11	NC	NC	NC	NC	NC	G	NC	NC	NP	F1	F1

NOTE 1) F1, F2 ····· Filament
2) NP ····· No pin
3) NC ····· No connection
4) G ····· Grid

8. BLOCK DIAGRAM



9. DISASSEMBLY

■ CD SINGLE MECHA ASSY

1. Remove the four screws ① holding the CD single mecha assy to the CD holder.
2. Raise the rear panel side of the CD single mecha assy and remove it.
   Please note that there is a positioning hole at the front panel side.

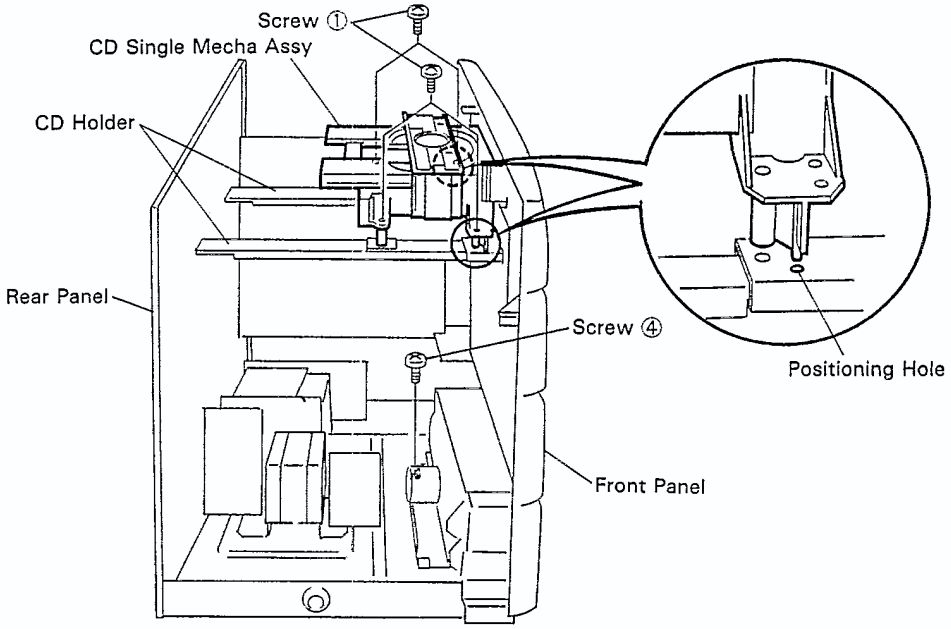


Fig. 1 Remove the CD Single Mecha Assy

■ FRONT PANEL

1. Remove the CD single mecha assy.
2. Remove the VOLUME knob and the screw ②.
   (Please be careful as the STA. lens is in the VOLUME knob.)
3. Remove the three screws ③ and the screw ④ (Refer to Fig. 1).
4. Pull the front panel quietly to the front to remove it.
   (Watching out for the claw on the left and right.)

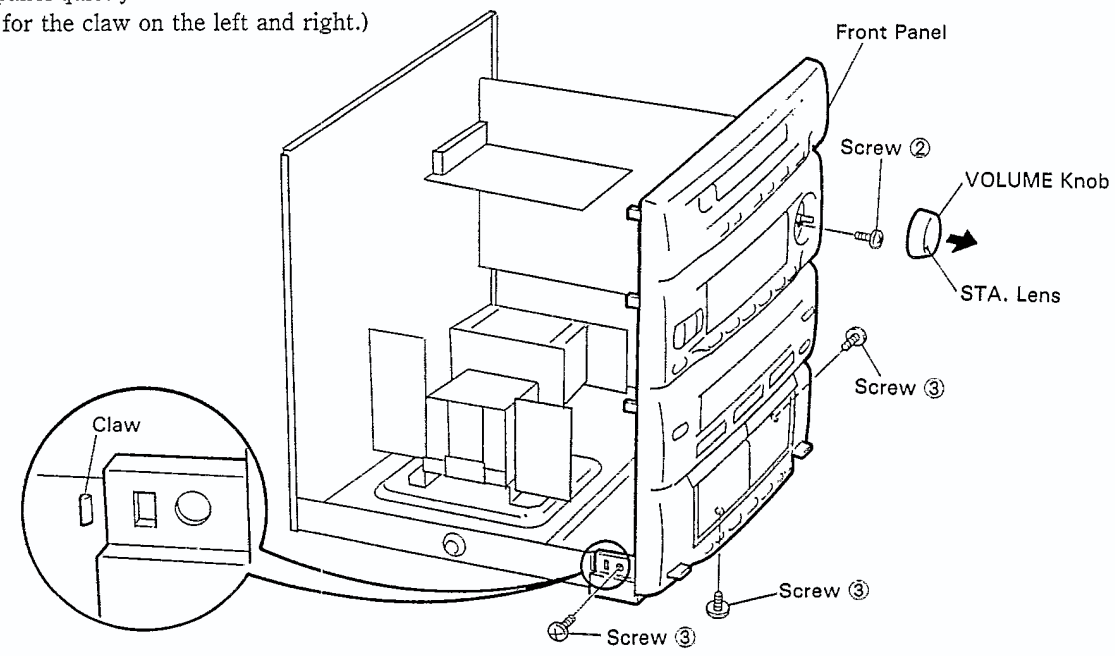


Fig. 2 Remove the Front panel

■ CASSETTE MECHANISM UNIT, H. P MIC ASSY AND DISPLAY ASSY

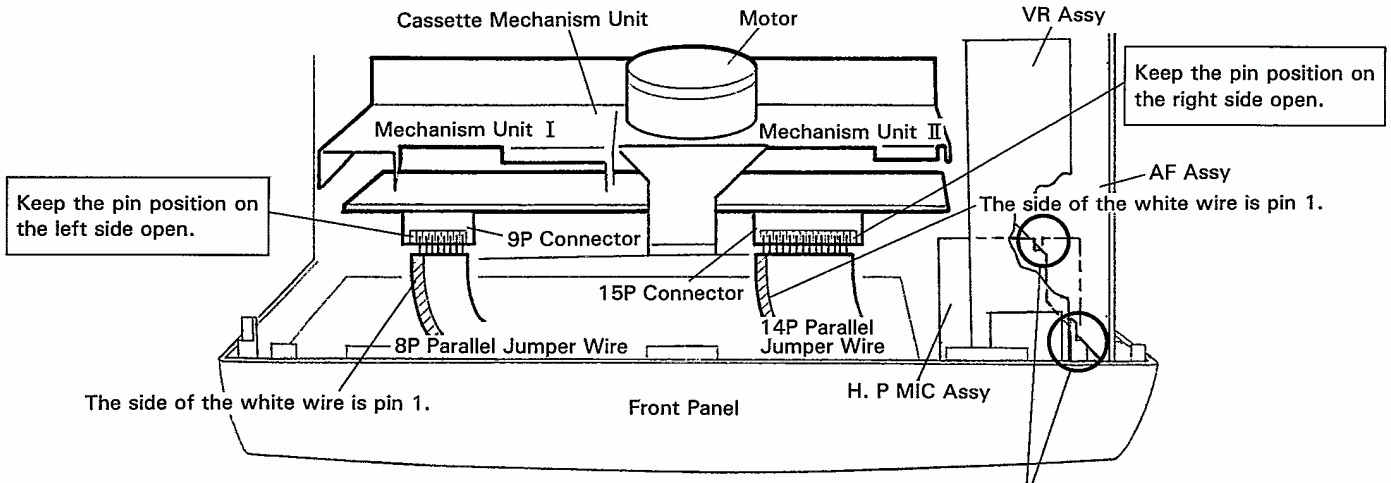
- As the cassette mechanism unit, the H. P MIC assy, the DISPLAY assy, etc. are installed on the front panel, please refer to the "2. EXPLODED VIEWS, PACKING AND PARTS LIST". (Remove the respective assemblies after removal of the front panel.)

● Installation of the parallel jumper wires connecting the cassette mechanism unit and the AF assy

The connector on the AF assy side is 8P on the side of mechanism Ⅰ and 14P on the side of mechanism Ⅱ, and for the cassette mechanism unit it is 9P on the side of mechanism Ⅰ and 15P on the side of mechanism Ⅱ. When connecting the parallel jumper wire on cassette mechanism side, connect so that the pin position on the outside is open.

● Circuit operation check with removed CD Single mecha assy

When the CD single mecha assy has been removed, the operation of the other circuits, except for the CD part, can be checked.

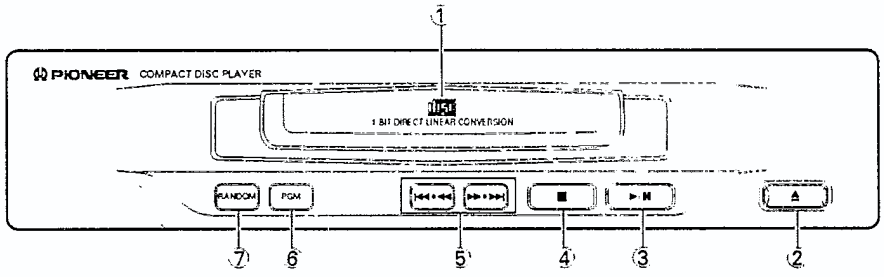

Cassette Mechanism Unit
Motor
VR Assy
Keep the pin position on the right side open.
Mechanism Unit Ⅰ
Mechanism Unit Ⅱ
AF Assy
Keep the pin position on the left side open.
The side of the white wire is pin 1.
9P Connector
15P Connector
14P Parallel Jumper Wire
8P Parallel Jumper Wire
H. P MIC Assy
The side of the white wire is pin 1.
Front Panel

Note: When installing the front panel, insert the AF assy into the recess of the front panel and into the recess of the mic holding mold.

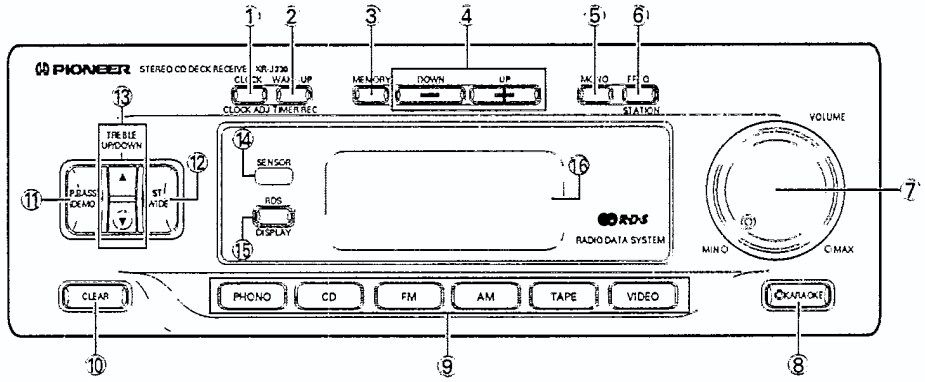
Fig. 3 Installation of the Parallel Jumper Wire

10. PANEL FACILITIES

CD PLAYER



RECEIVER



The illustration shows model XR-J330.

CD PLAYER

① **Disc Tray**
② **Open/Close button (⏏)**
③ **Play/Pause button (►/II)**
④ **Stop button (■)**
⑤ **Manual/Track search buttons (I◄◄ • ◄◄, ►► • ►►I)**
⑥ **PGM button**
⑦ **RANDOM button**

RECEIVER

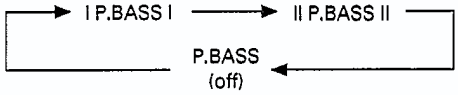
① **CLOCK, CLOCK ADJ button**
② **WAKE-UP, TIMER REC button**
③ **MEMORY button**
④ **UP/DOWN buttons**
⑤ **MONO button**
⑥ **FREQ STATION button**
Each time this button is pressed, the mode changes between FREQUENCY and STATION.
⑦ **VOLUME control**
⑧ **KARAOKE button (XR-J330 only)**
⑨ **Function buttons**

■ Auto Function

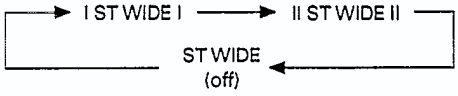
This model is equipped with an "Auto Function" operation, so when the switch for PLAY/PAUSE (CD), RANDOM, TAPE I/II, PLAY (tape), or FM/AM (remote control) is pressed, the function switches automatically. Use the Function buttons to select the component connected to the VIDEO/AUX IN jacks, since Auto Function is not effective for this.

NOTE:
The function cannot be switched during recording and tape copying.

⑩ **CLEAR button (XR-J330 only)**
⑪ **P.BASS (DEMO) button**
Each time this button is pressed, the mode changes in the following sequence:

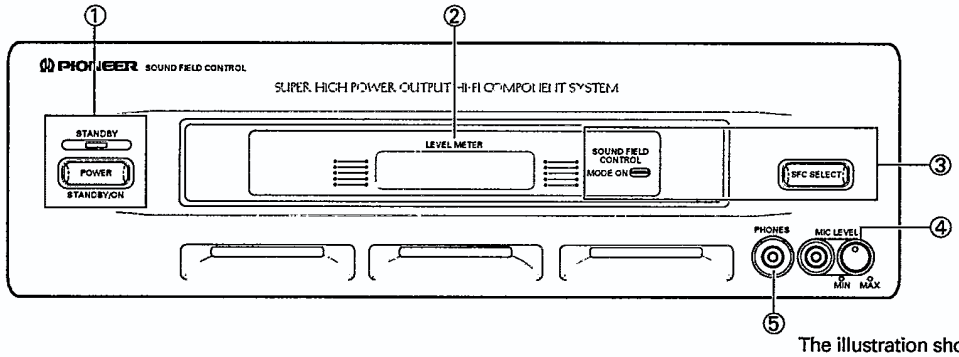


⑫ **ST.WIDE button**
Each time this button is pressed, the mode changes in the following sequence:



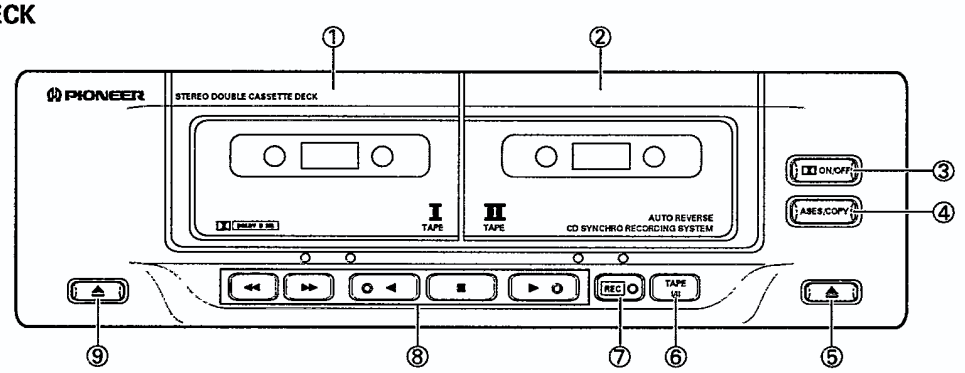
⑬ **TREBLE UP/DOWN buttons (XR-J330 only)**
⑭ **Remote sensor (SENSOR)**
⑮ **DISPLAY button (XR-J130)**
RDS, DISPLAY button (XR-J330)
⑯ **Display**

SOUND FIELD CONTROL



The illustration shows model XR-J330.

CASSETTE DECK



SOUND FIELD CONTROL

① POWER STANDBY/ON switch and STANDBY indicator

This is the switch for electric power.

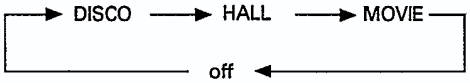
ON : When set to the ON position, power is supplied and the unit becomes operational.

STANDBY : When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness. (The STANDBY indicator lights.)

② POWER INDICATOR (XR-J130)
LEVEL METER (XR-J330)

③ SFC (SOUND FIELD CONTROL) SELECT button and indicator

Each time this button is pressed, the function changes in the following sequence (The selected function is displayed in the display window.):



④ MIC LEVEL and MIC jack (XR-J330 only)

⑤ Headphones jack (PHONES)

CASSETTE DECK

① TAPE I cassette door

② TAPE II cassette door

③ DOLBY* NR ON/OFF button

Each time this button is pressed, DOLBY NR system turns ON and OFF.

④ ASES (Auto Synchro Editing System)/COPY button

⑤ TAPE II Eject button (⏏)

⑥ TAPE I/II selector button

⑦ REC button (REC)

⑧ TAPE operation buttons (Play ◄ ►, Stop ■, Fast ◄◄ ►►)

⑨ TAPE I Eject button (⏏)

*

- *Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.*
- *"DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.*

11. SPECIFICATIONS

STEREO CD CASSETTE DECK RECEIVER

Amplifier Section

<XR-J130>

Continuous Power Output (DIN) ..... 36 W + 36 W
(1 kHz, T.H.D. 1 %, 8)
Continuous Power Output (RMS) ..... 50 W + 50 W
(1 kHz, T.H.D. 10 %, 8)
Music Power Output (DIN) ..... 100 W + 100 W

• *Above specifications are for when power supply is 230 V.*

<XR-J330>

Continuous Power Output (DIN) ..... 53 W + 53 W
(1 kHz, T.H.D. 1 %, 8)
Continuous Power Output (RMS) ..... 70 W + 70 W
(1 kHz, T.H.D. 10 %, 8)
Music Power Output (DIN) ..... 133 W + 133 W

• *Above specifications are for when power supply is 230 V.*

FM/AM Tuner Section

FM Tuner Section

Frequency Range ..... 87.5 MHz to 108 MHz
Antenna input ..... 75 unbalanced

AM Tuner Section

Frequency Range
With 9 kHz step ..... 531 kHz to 1,602 kHz
Antenna ..... Loop antenna

Miscellaneous

Power Requirements
European model ..... AC 220 ~ 230 V, 50/60 Hz
U.K. model ..... AC 230 V, 50/60 Hz
Power Consumption
XR-J130 ..... 230 W
XR-J330 ..... 330 W

CD Section

Type ..... Compact disc digital audio system
Wow and Flutter ..... Limit of measurement
(±0.001 % W.PEAK) or less (EIAJ)

Cassette Deck Section

Systems ..... 4 track, 2-channel stereo
Heads ..... Recording/playback head x 1
Playback head x 1
Erasing head x 1
Motor ..... DC servo motor x 1
Tape Type ..... TYPE I (Normal) tape/TYPE II (CrO_2) tape
Dimensions ..... 360 (W) x 430 (H) x 337 (D) mm
Weight (without package)
XR-J130 ..... 9.0 kg
XR-J330 ..... 9.5 kg

Accessories

Operating Instructions 1
Remote Control Unit 1
FM Antenna 1
AM Loop Antenna 1
Size AA/R6P Dry Cell Batteries 2
Speaker cords (supplied with speaker system) 2

NOTE:
Specifications and design are subject to possible modifications without notice, due to improvements.